

EO-MINERS

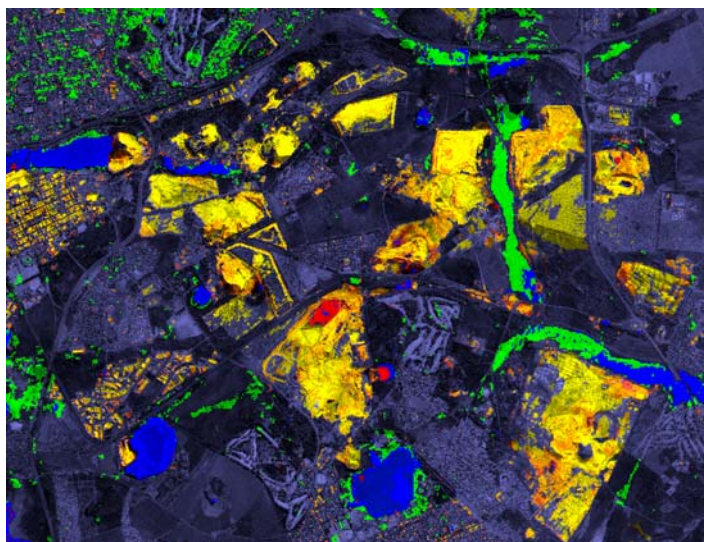
Earth Observation for Monitoring and Observing Environmental and Societal Impacts of Mineral Resources Exploration and Exploitation (EO-MINERS) is a medium-scale focused research project funded by EU FP7.



Background

In recent years, the EU's total material requirement has remained at a constantly high level –roughly 50 tonnes a year per head of the population since the middle of the 1980s. But in this time the weight of imports and their environmental impacts have considerably increased (EEA 2003). The bulk of this increase is attributable to ores, mineral fuels, metalware and products such as glass, ceramics and precious stones. More than half of these originate in the developing countries, while fewer resources are extracted in Europe itself. With the closure of mines environmental pressure has been reduced in Europe but risen in other regions. One tonne of imports leaves behind an average amount of 5 tonnes in mining waste, emissions and erosion in the exporting country. This ratio has more than doubled over the past twenty-five years, and in the case of ores has quadrupled from 1:4 to 1:16 tonnes.

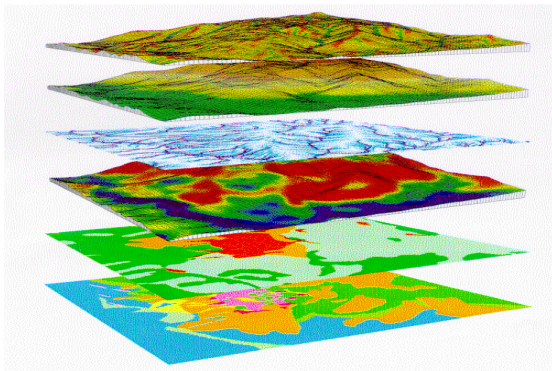
The analysis of the ecological impacts of imports to the EU reveals that environmental burden is shifted with significant social and economic consequences in other parts of the world. The global dimension of this problem is being increasingly recognized. As a result, the European Commission launched in autumn 2008 “The Raw Materials Initiative – Meeting our Critical Needs for Growth and Jobs in Europe” (COM(2008)699).



Objectives

EO-MINERS aims at integrating new and existing Earth Observation tools to improve best practice in mining activities and to reduce the mining related environmental and societal footprint by

- introducing innovative remote sensing tools to the mining industry,
- providing accuracy and quality measures for remote sensing products,
- demonstrating the application of Earth Observation in different case studies,
- fostering the dialogue between mining industry and environmental organisations based on EO-derived information and
- generalising the obtained results to be used in operational mining applications in the future.



EO-MINERS is to improve interaction between the mineral extractive industry and the society in view of its sustainable development while improving its societal acceptability. Mining companies, regulatory bodies and stakeholders need various EO-based tools and methods adequately juxtaposed regarding the local contexts and applications.

As the EU is strongly interested in the establishment of measures for raw material flow analysis, especially for imported mineral resources, this project will contribute to the development of measures that can be used to analyze the mining operations taking the individual potential ecological and social footprint into account.