



Cement Sustainability Initiative

CSI Quarry Rehabilitation Guidelines – Case Study

Quarry Rehabilitation: a Titan experience

ESIA for Antea green-field project in Albania

Location and situation

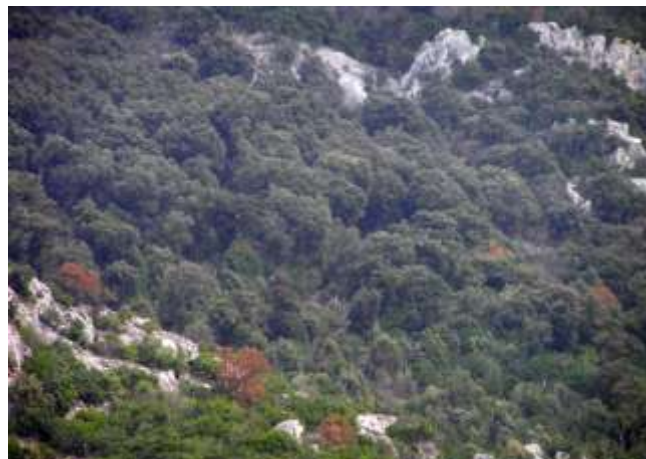
The Antea green-field project of Titan Group is located within the municipality of Picrraga and close to the town of Burizana, to the north east of Tirana, Albania, and included the construction of a new cement production facility and development of two new quarries for producing the main raw materials for this operation, over a 'green' area. The project was partly funded by the European Bank of Reconstruction and Development (EBRD) and the International Finance Corporation (IFC). It was classified as 'A' category by the EBRD and the IFC, requiring an Environmental and Social Impact Assessment (ESIA). The ESIA was conducted in 2008 by the ATKINS international consulting company. Further to the ESIA that covered the entire project, focus Environmental Impact Assessment Studies and Quarry Management Plans were developed for the two associated quarries. The Antea Cement Plant has been put in operation since April 2010.



Antea Cement Plant site

Known biodiversity

Based on field investigation results and the ESIA, the specific sites proposed for the development (cement plant and quarries) are not designated as conservation areas and are not considered to be "Critical Habitat" as defined by IFC's Performance Standard 6 "Biodiversity Conservation and Sustainable Natural Resources Management". Two flora species that are included in the Red List of Albania, namely *Quercus ilex* (holly or holm oak) and *Salvia officinalis* (sage) have been recorded on project-affected sites. These species are recommended to be enhanced during



Holm oak forest (*Quercus ilex*)

This case study is part of the CSI Quarry Rehabilitation Guidelines published in 2011.

rehabilitation practices and planning by promoting them for planting along with other species.

Targets and aims

The targets of the Antea ESIA, with focus on quarrying activities, may be summarized as follows:

- Assess the impact of the proposed development on ecology, biodiversity and landscape during the different project phases, namely construction, operation and closure.
- Propose specific mitigation measures to limit these impacts.
- Provide guidance for the development of successful long-term quarry rehabilitation plans that will incorporate the needs of the local ecology.

Restoration activities

Following the ESIA, an Environmental and Social Action Plan was prepared, in line with EBRD and IFC standards, for the Antea project, and among others included the development of quarry management and rehabilitation plans. The Quarry Management Plans (QMPs) for both quarries were completed in 2010 and comprised a structured and practical desk study, providing planning outlines, aligned with the existing (and officially approved) Quarry Mining Projects and Environmental Impact Assessment Studies. In this respect, the QMPs had to align with country legislation and also conform to Titan Group best practices for quarries development and rehabilitation. The QMPs included the overall (long-term) mine plans, the detailed 5-year plans and the first year of quarry operations (focus annual plan), and aimed at ensuring and presenting a rational plan for quarry depletion, mine scheduling and rehabilitation-reforestation of benches.



Quarry 5-year Mining & Rehabilitation Plan

The quarry rehabilitation plans are today an integral part of the Antea plant Environmental Management System (EMS) with all relevant procedures, working instructions and monitoring practices for the quarries rehabilitation activities, to ensure implementation of plans, progressive landscaping and reclamation for mined-out areas.

Although still at the very early stage of quarry development, rehabilitation practices are already enforced in the upper (depleted) benches of the Antea quarries, and the commitment is to progress in line with the quarry development.

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Partners

European Bank of Reconstruction and Development (EBRD)

International Finance Corporation (IFC)

ATKINS

University of Tirana (flora Specialist)

Innovations / highlights

- Development of an ESIA for such green-field project for the first time, according to EBRD and IFC requirements and standards.
- Impact assessment and planning for quarry rehabilitation prior to operations and throughout all stages of the project life cycle.
- Integration of the quarry rehabilitation plans into the EMS for the appropriate implementation and monitoring of rehabilitation. Focus: QMPs and Annual Monitoring and Reporting (AMR).

Lessons learned

A well structured ESIA covers all possible positive and negative environmental and social impacts related to quarry operations, allowing for the definition of the rehabilitation objectives and setting the basis for effective and successful short-term and long-term quarry rehabilitation plans.

Further information

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