



ANTEA Cement
Best practice for quarry rehabilitation

Fact sheet 2015/ENV/2

Antea's Quarry rehabilitation -A best practice according to WBCSD/CSI

The case study for the quarry rehabilitation has been awarded as best practice from WBCSD/CSI, for the below listed actions:

- ✦ A quarry management plan was in place before the start of Quarry operation
 - ✦ A rehabilitation plan was in place before the start of the Quarry operation
 - ✦ Identification of the flora and endemic species of the region prior to start Quarry operation was conducted
- Rehabilitation took part within the first year of Quarry operation
- ✦ 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 introduced in the quarry rehabilitation process.
 - ✦ The first quarry in Albania to be exploited according to EU standards and in fully compliance with the legislation



**Salvia officinalis (sage),
planted in the quarry of ANTEA.**



**Quercus ilex (holly or holm oak) ,
planted in the quarry of ANTEA.**

As a Greenfield Project, Antea Cement required an Environmental and Social Impact Assessment (ESIA), which was conducted in 2008 by the ATKINS international consulting company. Following the ESIA and in line with EBRD and IFC standards, the development of quarry management and rehabilitation plans for the Antea project were conducted as well.



Water Footprint

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The ANTEA cement “hydro-drilling” project was initiated by Production Technology (PT) in March 2007 with a preliminary Study by the ANTEA Geo-Team in cooperation with experts from Tirana University of the hydro geological conditions of the Burizane area. The aim of the study was

“Study of the hydraulic characteristics of the system of aquifers in the general area of Burizane, and suggested actions for the sustainable management of the groundwater potential for the needs of the future ANTEA Cement Plant, by evaluating the rate of influence of the aquifer with reference to the surrounding areas”.

After a detailed study performed by the experts which lasted 9 months, it was concluded that:

“Based on the calculated Cement Plant needs (at maximum), the annual rate of pumping from the Burizane aquifer is hardly 3% of the total annual potential of the replenishment of the aquifer, i.e. the “fresh” water supply/recharge in the aquifer for the general area”.

The impact to the aquifer of the region, due to the continuous effort in water management and reduction, nowadays hardly reaches 1 % !

How this has been achieved?

- ☛ A water management system is in place.
- ☛ The water from wells is being monitored for the quality and quantity by independent accredited laboratories (although not a requirement from legislation).
- ☛ Water level measurements are taking place in the water drills on monthly basis in order to assure sustainable water withdrawal
- ☛ Closed system for water recycling in place
- ☛ A well-defined network of flow-meters in place in order to identify and easily track possible water leakages
- ☛ Water consumption by destination it is monitored
- ☛ Year-to-date, ANTEA's demand for water is less than 1/3 of the initial amount predicted and taken in consideration during the period when the Hydrogeological study took place.