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## Integrating geological, biological and industrial heritage: a Master Plan for dismissed quarry areas in the Emilia Apennines (Italy)

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Quarry activities can generate considerable long-term on-site and off-site impacts on the environment. Since the last twenty years it has become urgent to address the issue of rehabilitation and requalification of dismissed quarry areas. For the rehabilitation and requalification measures to be effective they must be strictly linked to local territorial resources and context, as shown by different types of rehabilitation schemes implemented in different parts of the world. Starting from these premises, this work focus on the rehabilitation of a recently dismissed quarry area in the Rio della Rocca valley (Emilia Apennines, Northern Italy), near the tile making district of Sassuolo, considered the largest in the world. During the past 50 years, quarrying activity has deeply modified the pristine landscape of this valley, which however still holds biotic and abiotic features of great naturalistic interest and scientific value. Today, dismissed quarries left untreated make the area degraded and rather unsafe due to their state of abandonment. However, former quarries can be considered as elements of the geological and industrial heritage reflecting the productive/industrial history of the region. As an added value, in several cases, quarries host valuable habitats and constitute important ecological shelters.

In this context, this work presents methods and actions that have led to the implementation of an environmental rehabilitation scheme within a Master Plan based on the integrated exploitation of geological, biological and industrial heritage for geotourism purposes. In defining the Master Plan, a bottom-up approach was applied by taking into account inputs coming from the local community at different stages of the rehabilitation process, particularly for the identification of opportunities and restrictions to territorial development. Once the potential for use of the Rio della Rocca catchment was enhanced, possible natural hazards which may threaten visitors and users were assessed in order to promote a safe and lasting territorial upgrading and to make the area safely accessible to a wider public.