EUROLITHOS European Ornamental Stone Resources

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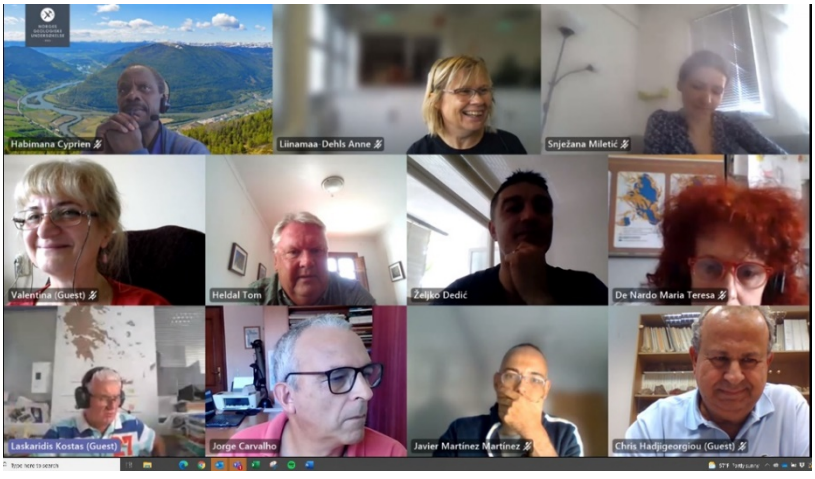
Eurolithos partners: What's left to do?

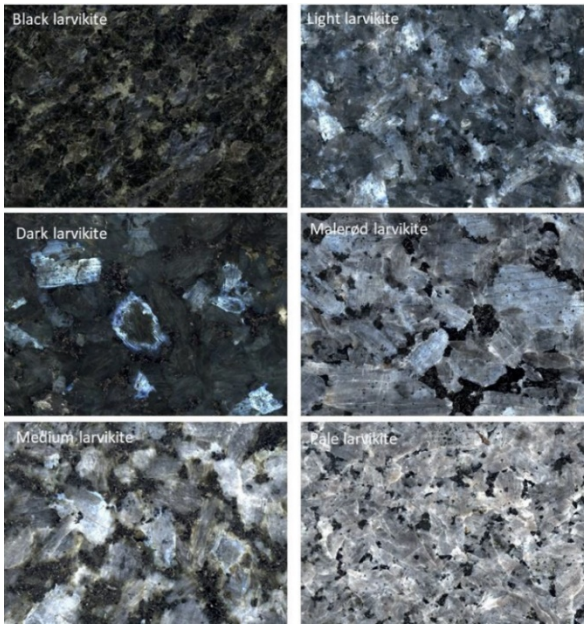


Consortium members meet on Teams, on 20 September. Valentina Cetean, Head of GeoResources, Geological Institute of Romania, encourages partners to smile: “Eurolithos has a lot to contribute”

"Smile, partners!" Tom Heldal and other Eurolithos consortium members met on 20 September to agree upon a time plan to complete the remaining actions before the project ends on 31 October. Some of the most important deliverables left are Eurolithos atlas (map services and country atlases (WP3), uploading of the directory of ornamental stone resources (WP4), guidelines for assessing heritage values of ornamental stone resources (WP5) and functional harvesting system for national databases to the EGDI platform (WP6).

The consortium also discussed the scientific volume to be published in early 2022 in the NGU Bulletin series.

Application of UNFC and for ornamental stones (D6.3)



In collaboration with another GeoEra project, Mintel4EU, Eurolithos made a test case for the application of the UNFC on ornamental stone resources. The study explores how the UNFC method can be applied in a holistic way for a specific Norwegian resource, the larvikite, which is employed as an ornamental stone all over the world. By combining geological, environmental and land-use planning data, UNFC categories are defined for this particular resource. We hope this methodology can have qualities for application also at other sites.

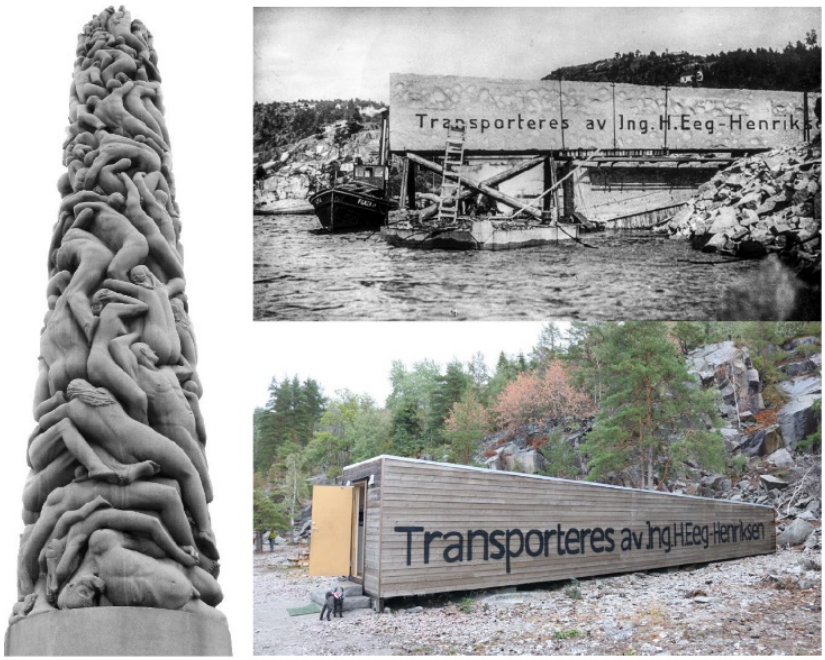
Download Deliverable 6.3 as pdf

To the left: Six types of larvikite: Polished slabs, each approximately 15 cm wide. Black and pale larvikite are not currently in production.

Eurolithos Working Group 5: Ornamental Stone Heritage

WG5 has completed 7 of the 12 proposed case studies to identify tools to assist in the valorisation of stone resources – and aims to complete more. Such tools can lead to the development of policy that will ensure better recognition of stone-built heritage, improved conditions for SME's and better protection of stone resources in land-use planning. In addition, the case studies help WG5 to develop brief guidelines for best practice, to be completed by October 2021.

Assessment of large quarry landscapes (Iddefjord granite quarry, Norway) download pdf
Responsible: NGU -- Author: Tom Heldal -- Theme: Value assessment



The author outlines several concepts for assessing non-economic values of large quarry landscapes, ranging from their connection to built heritage to the historic landscape and their role as markers of key historical events.

Refer to the entire case study and/or view this short slide show.

The montage represents the use of the Iddefjord granite used for the world-famous Vigeland sculpture park in Oslo and how it adds to the value of the resource. Clockwise from the left: the Monolith sculpture, the granite block's transport container, and the mini-museum found today at the quarry site.

Heritage assessment of a historical quarry (Magura Calanului, Romania) – download pdf

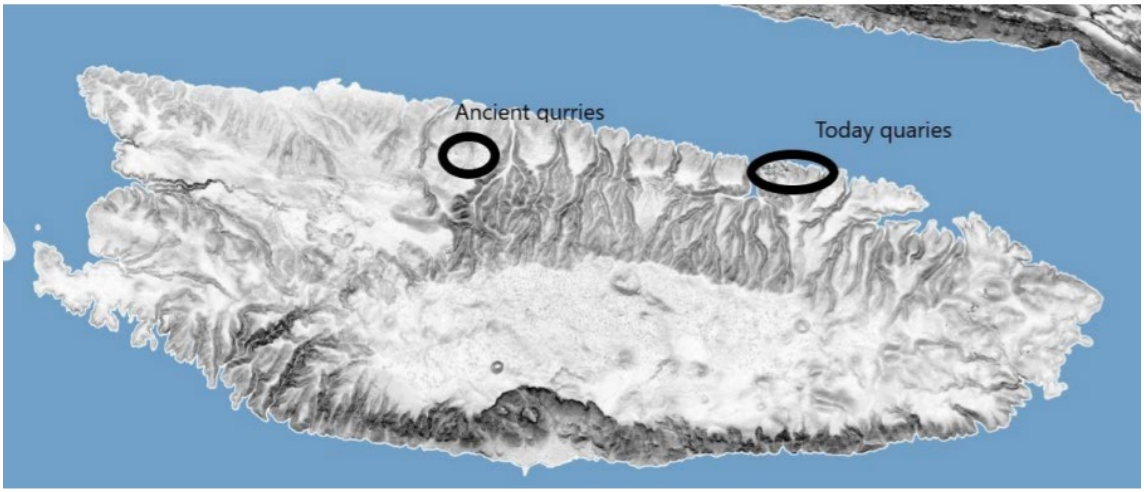
Responsible: Geological Institute of Romania; Author(s): Valentina Cetean, Aurora Pețan: Theme: Value Assessment

The site of the Dacian fortresses achieved Unesco World Heritage status in 1999. However, the source of the stone – the 'geosite' Măgura Călanului quarry - lacks the designation as a protected site. The authors describe the need for a detailed, systematic and meta-disciplinary study of the quarries to demonstrate how the resource is connected to historical-cultural monuments. Other Eurolithos participants could contribute by identifying key sites in their country and sharing experiences with other members. Such shared experience could be the basis for conservation policy for quarries linked with a regions cultural history.

Montage: Măgura hill has been confirmed to be the main source of stone for the World Heritage site: the Dacian fortresses of the Orastie Mountains (from Case Study)

Heritage assessment of quarry landscapes (Pučišća, Brač, Croatia) – download pdf

Responsible partner(s): HGI-CGS--Author(s) –Željko Dedić, Marija Horvat, Vlatko Brčić --Theme: Value assessment

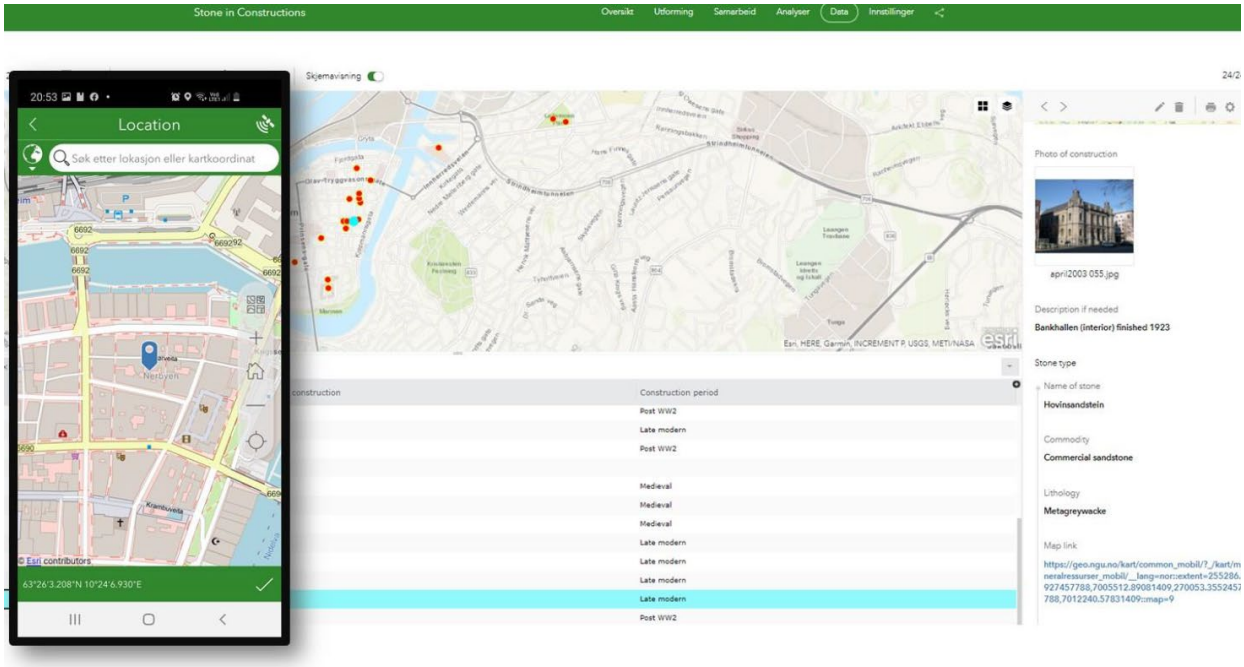


Location of the ancient and today quarries near Pučišća, the island of Brač, Republic of Croatia

HGI-CGS led this case study that explored a system of best practices in the identification, description, and interpretation of features of quarrying. The limestones quarries in Brač and quarry landscape were investigated and characterised along several axes: geology, history, crafts and technology and impact on the landscape. The authors argue for the conservation and management of quarries in Brač; Plate, Stražišće and Rasohe and the designation of the quarry landscape as cultural heritage.

Open data solutions for linking ornamental stone resources with buildings (Norway) - download pdf

Responsible partner: NGU -- Author(s): Tom Heldal, Kjersti Mølmann -- Theme: Stone in constructions



Above: Survey123 application "Stone in construction."

The connection between stone constructions and the employed ornamental stone resources is crucial for future maintenance and restoration. In addition, these connections will enhance locally sourced stone resource production that can contribute to sustainability and ensure that future constructions are in harmony with local and traditional material use. The authors consider an open data solution that can better determine the link between stone constructions and the stone resource. Making this connection more recognisable is a crucial part of the resource's intrinsic value.

Traditional crafts in modern stone production (Norway) – download pdf

Responsible partner: NGU -- Author(s): Tom Heldal -- Theme: Stone in constructions

Splitting of slabs along the thin mica layers

This case study shows that traditional crafts dating back to the 11th century are still essential for the production of the Oppdal schist. Even though advanced technology is employed in schist processing, traditional crafts are needed for several modern-day applications. The author analysed the numerous steps in the schist production, which represents a craft that needs further documentation, attention and preservation. The analytical methods applied could be transferred to other sites as a part of the value assessment.

Sustainable exploitation of ornamental limestones in Maciço Calcário Estremenho (Portugal) – Download pdf

Responsible partner: LNEG -- Author(s): Jorge Carvalho; José Vitor Lisboa -- Thematic focus: Sustainability and ornamental stone

Parque Natural das Serras de Aire e Candeeiros (PNSAC) is one of the world's most important sites for producing ornamental limestones. Is it possible to balance the need for continued extraction of ornamental stone while considering conservation in a nature reserve?

Value or relevance classes are assigned after characterising an area's geological, ecological, and geological heritage aspects. After this joint valorisation activity, decisions on management and extraction are made on a case-by-case basis.

The authors conclude that the "key to the success of this case study was the development of a partnership between the association representing the extractive industry and the Portuguese environmental authority."

Best practices of natural stone valorisation for the preservation of stone-built heritage: the case of platy limestone as a characteristic element of cultural landscape along the Eastern Adriatic coast – Download pdf

Responsible partners: Geological Survey of Slovenia (GeoZS), Croatian Geological Survey (HGI-CGS) -- Thematic focuses: Ornamental stone resource value assessment, Stone and built heritage -- Authors: Matevž Novak and Snježana Miletić (GeoZS)

The authors describe the need for sustainable stone use in the Adriatic-Ionian Macro-Region to allow stone extraction while preserving the cultural and natural landscape. Legislative changes could make the local natural stone available for restoration projects in selected areas. A White Paper for Sustainable Tourism had been drafted pointing to legislative changes needed to protect the stone heritage in the region. Amendments to legislation are urgent to ensure that natural stone resources are available to preserve stone-built cultural heritage.

Typical architectural elements of the cultural landscape of the Eastern Adriatic coast. Reproduced from Novak (2015)

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