

UNESCO interventions funded by the Government of Italy in Petra

Petra is one of the world's richest and largest archaeological sites set in a dominating red sandstone landscape and was inscribed on the UNESCO World Heritage List in 1985, in light of its Outstanding Universal Value. The preservation of this Site is a key component of the technical support provided by UNESCO to the national authorities in charge of the conservation and management of Jordan's extraordinary heritage.

The "Siq Stability" Programme (2011-2018)

The 'Siq' (literally, 'the shaft') is a 1.2 km long canyon representing the magnificent ancient entrance to Petra. It is a unique monument for its geological, sacred and cultural significance, which well enshrines the Outstanding Universal Value of the site. Geologically, a fault split apart by tectonic forces and worn smooth by water through centuries; culturally, a Nabataean sacred site characterized by votive niches (*baetyloi*) and ingenious hydraulic solutions to manage clean water.

Since 2011, the Government of Italy has been supporting a number of consecutive initiatives with the aim of reducing landslide risk and ensuring tourist and monument safety through the implementation of the "Siq Stability" programme (2011-2018). This initiative has been followed by the "Youth for Heritage Conservation and Risk Prevention" initiative (2018-2020), which aims at enhancing the capacities of and providing employment opportunities to youth by contributing to the implementation of priority interventions in the 'Siq'.

"SIQ STABILITY - Sustainable Monitoring Techniques for Assessing Instability of Slopes in the Siq of Petra, Jordan" - Phase I

Budget: 888,000 EUR | Timeframe: March 2012-Sept 2015

The first phase of the project focused on conducting an in-depth assessment of landslide risk in the 'Siq' based on an engineering geology field survey and the installation of an integrated and operational monitoring system using accurate and reliable techniques. In addition, comprehensive documentation of the site through advanced techniques such as 3D laser scanning, photogrammetry and panoramic photography was conducted and a new GIS common platform for storage, analysis and management of data was established.

This project was implemented in partnership with the Petra Development and Tourism Region Authority, the Department of Antiquities, the Italian Institute for Environmental Protection and Research (ISPRA – Geological Survey of Italy), the Zamani Research Group (University of Cape Town), the Petra National Trust (PNT) and Jordanian experts in the field of heritage documentation.

"SIQ STABILITY - Mitigation of Immediate Hazards in the Siq of Petra, Jordan" - Phase II

Budget: 500,000 EUR | Timeframe: Sept 2015-Jan 2017

Within Phase II of the "Siq Stability" project, mitigation of landslide risk in the 'Siq' was operationally carried out through the implementation of priority and urgent landslide risk mitigation interventions, targeting most hazardous situations on the upper 'Siq' plateau and along the 'Siq' slopes. Capacity development of the national authorities and awareness raising activities were also carried out.

This project was implemented in partnership with the Petra Development and Tourism Region Authority and the Department of Antiquities of Jordan.

"SIQ STABILITY - Managing Disaster Risks in the Siq of Petra, Jordan" - Phase III
Budget: 400,000 EUR | Timeframe: Feb 2017-May 2018

Building on the positive results achieved during the previous initiatives, this phase of the project implemented mitigation measures in those priority areas identified as more hazardous. The project targeted specific blocks of large dimensions located at higher locations along the 'Siq' slopes, which were identified as more at risk, following a feasibility study conducted during Phase II of the project.

This project was implemented in partnership with the Petra Development and Tourism Region Authority and the Department of Antiquities of Jordan.

"Jordanian and Syrian Youth for Heritage Conservation and Risk Prevention in Petra"
Budget: 1,500,000 EUR | Timeframe: Sept 2018- Dec 2019

Capitalizing on the achievements of the "Siq Stability" programme, the project aims at enhancing the capacities of and providing employment opportunities to Jordanian and Syrian youth on cultural heritage conservation and risk prevention by contributing to the implementation of priority interventions in Petra, with a primary focus on reducing landslide risks in the 'Siq'. Specialized trainings are being delivered in the areas of geology and engineering geology applied to cultural heritage, safety and security at the work site and cultural heritage conservation and maintenance.

This project is currently being implemented in partnership with the Petra Development and Tourism Region Authority and the Department of Antiquities of Jordan.

Heritage Conservation in Petra

The fragile sandstone that comprises the monuments and the natural susceptibility to natural hazards make the conservation of Petra's heritage challenging. Over the past years, international and national experts have tried to identify strategies to protect Petra's monuments in an effort to preserve the authenticity of the site. Nowadays, comprehensive and new conservation approaches that are specific to the site need to be researched.

From 2015 to 2018, the UNESCO Amman office has been working with the Petra Development and Tourism Region Authority and the Department of Antiquities of Jordan on the development of an Integrated Management Plan for the site, establishing a guidance framework for the implementation of conservation interventions and the identification of comprehensive conservation approaches.

"Preserving Petra's Nabataean architectural heritage through the study of the Royal Tombs water management system and the conservation of the Palace Tomb"
Budget: 1,000,000 EUR | Commencing in April 2019

In line with UNESCO Amman Office's long-term approach towards the preservation of Petra's outstanding heritage and building upon former initiatives undertaken for the preservation and management of the site, this project aims at ensuring the conservation of one of the most prominent rock-cut façades within the site: the Palace Tomb. These efforts are in line with the conservation policies identified as part of the Petra Integrated Management Plan and after having developed a feasibility study for the conservation of the Royal Tombs water management system. The project also responds to a strongly felt need to develop local technical skills on heritage conservation and raise awareness among the local community about the need to further preserve their heritage and maintain it for future generations.