



An Alternative Georoute: Approaching the Geological Heritage of the SE Part of Milos Island, Greece, via Hiking, Kayaking and Snorkeling

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Milos Island is located at the southwest edge of the Cyclades island complex, in the central part of the Aegean archipelago. It is part of the modern South Aegean Volcanic Arc (SAVA), which belongs to the Hellenic subduction zone. This on-going process has resulted in the coexistence of complex geological formations and geodynamic phenomena with sceneries of incomparable natural beauty, in many areas along the arc. Among them, Milos Island is widely known to be a place of astonishing geological and natural wealth, combined with a cultural heritage that dates back to the 8th millennium BC.

As geotourism has been rapidly evolving worldwide over the last years, Milos Island was among the first places in Greece that developed a network of geotrails and featured many sites of special interest in terms of geology, volcanology and geoarchaeology. This study proposes an original georoute through land and sea, which aims to emerge both overland and underwater areas of special interest. It is a novel way to approach the geological and cultural wealth of Milos and focuses on the Aghia Kiriaki area, at the South part of the island. This alternative georoute includes hiking, kayaking and snorkeling, and anyone who follows it, can be guided to a significant number of important geological, volcanic, morphological and geoarchaeological sites, in a relatively narrow area, combining athletic activities as well. The proposed georoute has a total length of 3,2 km and an estimated time of completion of about 4 hours. It starts from Aghia Kiriaki area, where visitors can see remnants of one of the island's collapsed calderic domes in a panoramic view towards the East. In the same site, volcanic emanations create impressive scenery, which introduces the participants to aspects of the island's geologic and volcanic history. After about 800 meters of hiking, throughout an area that is dominated by products of phreatic eruptions, Aghia Kiriaki beach is the next stop. Impressive findings of roman pottery can be observed in this site. At this point, hiking alters to kayaking eastwards along the coastline until the third stop, Psarovolada beach. Extended outcrops of the metamorphic basement of the island, along with submerged hot springs are also observed in the area, while not far away from this point, the most daring participants can dive and enjoy the underwater view of the hot springs at the bottom of the sea. The kayaks are used for further 150m until the unique site of the pre-volcanic formations of the island. From this point, georoute continues and visitors have again the opportunity to dive and approach another submerged hot springs location, just by swimming approximately 20 m eastwards. The sea trip ends at Sirocco, which is located in the center of the Paleochori Beach, where visitors can evaluate their experience.

The proposed georoute aims to highlight that preservation of the geological heritage fosters values that promote society and geotourism is an excellent motivation of implementation.