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The endemic Cretan lizard, *Podarcis cretensis*.

The alpine zone of the White Mountains, viewed from Roussies.



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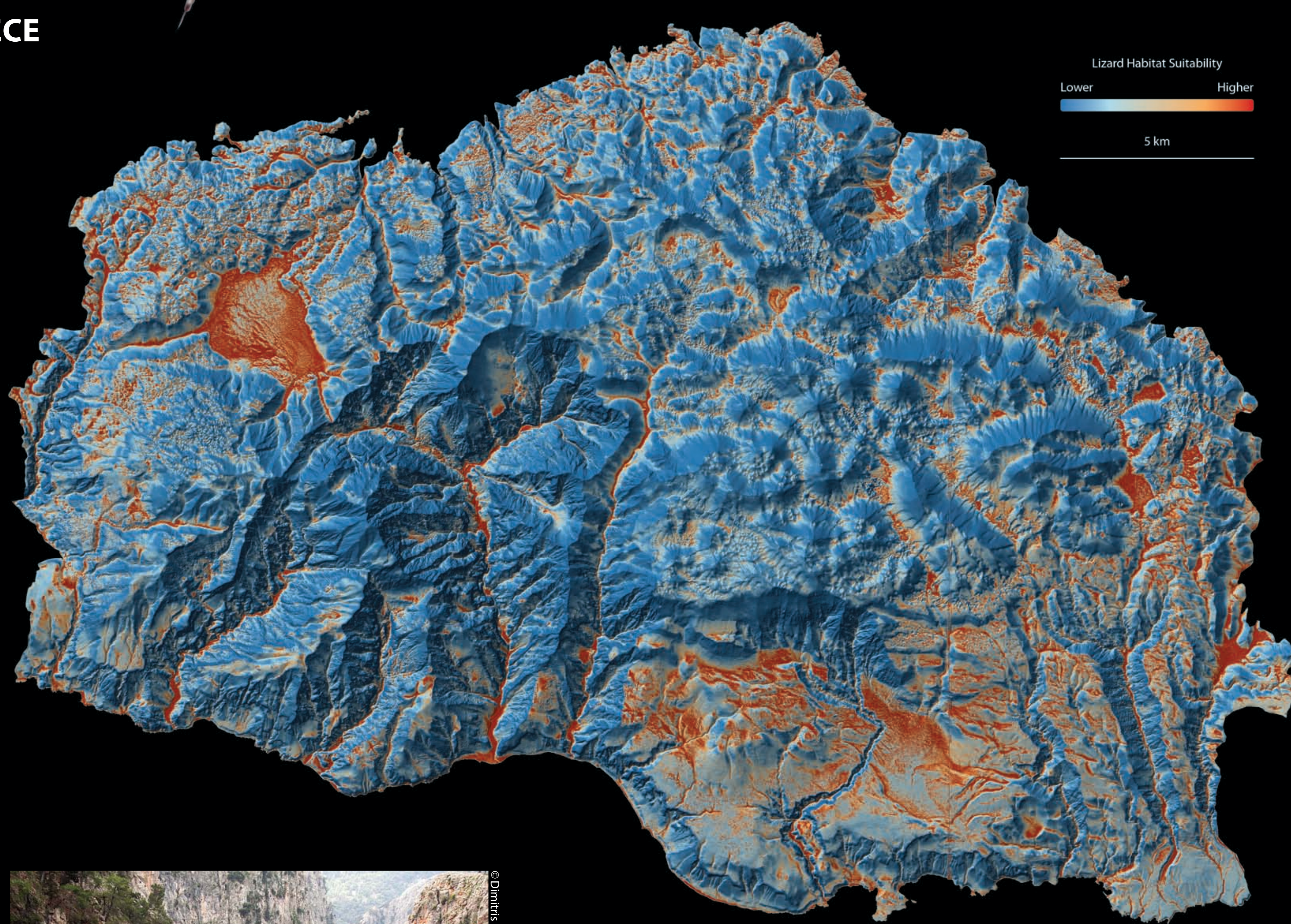
# Samaria

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Crete is one of the largest islands in the Mediterranean Sea. With over 1,000 km of coastline, it is famous for its sandy beaches and is a popular holiday destination. The island is also home to a range of important Mediterranean ecosystems, including 200 wetlands and three mountain massifs. The White Mountains in the west, the largest massif on the island, has many scenic gorges, as well as snow that lasts up to May on its peaks. Located in these mountains, Samaria National Park protects an extensive range of Mediterranean mountain biodiversity, including endemic species that can only be found on certain cliffs or peaks.

The Samaria National Park is home to six species of lizards, including the Cretan lizard (*Podarcis cretensis*) which is endemic to western Crete. Within the park, ECOPOTENTIAL is using Earth Observations to better understand and predict the preferred habitat of Cretan lizards, including using Digital Surface Models to provide a 3D representation of the terrain. A mathematical model takes into account a range of factors such as solar radiation, wind exposure and terrain roughness to predict the spatial distribution of lizards. These are combined with actual recordings of lizard locations to test and refine the model. By feeding climate projections into the model, it can also be used to predict where lizards might be in the future.

Knowing which areas are and will be important for the lizards is essential for targeted conservation of this endemic species. Human activities that threaten their habitats can be managed to best preserve the ecological integrity of the national park, which brings a large number of visitors and income for the local economy.



Map of the Cretan lizard habitat suitability obtained from the combination of algorithms, Earth Observation products and field data.

Processed by FORTH for ECOPOTENTIAL.



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Pastoralism is a traditional way of life in the White Mountains.



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A bird's eye view of the Aradaina gorge.



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The Samaria gorge takes its name from the village located in the middle of the gorge, here pictured.



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