

Geoheritage and the conservation of historical and geological sites in Guadeloupe, French West Indies

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In 2002 the law for a Democracy of Proximity was voted by the French parliament. It stated that the State takes care of the conception, the animation and the evaluation of the Natural Heritage. This heritage shall include all ecological, fauna, flora, geological, mineralogical and paleontological items of interest. For the Geoheritage, in which we include human-related sites of interest, Guadeloupe (French West Indies) was chosen as a test territory. Indeed, its geology is very rich and very peculiar, with a lot of variation. It includes for example a carbonate platform, coral reefs (both actives and fossils), mangroves, on-shore and submarine thermal springs, a great variety of volcanic deposits, tropical karsts and an active volcano, La Soufrière. So, as soon as 2003, local stakeholders in Guadeloupe have been referencing several sites and created a collection of 33 outcrops' descriptions. In 2015, all these sites had been validated at the national level and entered into a national database (IGeotope). This inventory is meant to be permanent and a living collection. Since late 2018, the Caribbean Academy of Sciences (Guadeloupe chapter) is re-evaluating the previous outcrops' descriptions for adding new information (like GIS mapping, thin-sections) to the sites. In the mean time, we also describe new geotopes with the particularity of adding sub-marine geological sites (coral reefs, underwater thermal springs) and emphasizing on human-related sites. When finalized, a territorial geo-heritage catalogue reveals itself a powerful tool for policy making and education. Despite the need to inventory the underground for resource purposes (water, building stone, mining) that has motivated geological research for centuries, such an inventory is meant to be used for protecting areas of natural interest, for teaching and for developing tourism. In isolated environments with limited mineral resources, such as the Guadeloupe archipelago, people have had to develop a specific knowledge of the local geology, for all purposes. Clays were traditionally used for roof tiles making and are still used for medicinal purposes. Traditional buildings were made with volcanic stones (mostly andesite) and limestone was processed in artisanal limekilns. Stone-made houses, limekilns and their extraction sites have a cultural value and represent an economic interest for tourism, but they suffer from a lack of protection, restoration and a poor awareness within the population. Indeed, although it is very present, most people remain unaware of this link between the local culture and the local geology. Nowadays, uncontrolled limestone quarries endanger many remarkable outcrops. Most of these quarries are small and designed solely to create a suitable flat area for building a concrete made house. The extracted limestone is used as a rather poor-quality road foundation material. One of the main aims of our project is therefore to raise awareness for conservation and valorization purposes.