



World Heritage Sites

Protected Areas and World Heritage



PITONS MANAGEMENT AREA SAINT LUCIA

The Pitons is an area of iconic, spectacular and unique coastal volcanic cones with neighbouring hot sulphur springs and a fringing coral reef in excellent condition. They are clothed in tropical moist and subtropical wet forest and harbour endemic species.

Threat to the site: 68% of the site is in private hands and risks being approved for luxury development.

COUNTRY

Saint Lucia

NAME

Pitons Management Area

NATURAL WORLD HERITAGE SITE

2004: Inscribed on the World Heritage List under Natural Criteria vii and viii.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE [pending]

The UNESCO World Heritage Committee issued the following statement at the time of inscription:

Justification for Inscription

Criterion (viii): The Pitons Management Area contains the greater part of a collapsed stratovolcano contained within the volcanic system, known to geologists as the Soufriere Volcanic Centre. Prominent within the volcanic landscape are two eroded remnants of lava domes, Gros Piton and Petit Piton. The Pitons occur with a variety of other volcanic features including cumulo-domes, explosion craters, pyroclastic deposits (pumice and ash), and lava flows. Collectively, these fully illustrate the volcanic history of an andesitic composite volcano associated with crustal plate subduction.

Criterion (vii): The Pitons Management Area derives its primary visual impact and aesthetic qualities from the Pitons, two adjacent forest-clad volcanic lava domes rising abruptly from the sea to heights greater than 700m. The Pitons predominate over the St Lucian landscape, being visible from virtually every part of the island and providing a distinctive landmark for seafarers. The combination of the Pitons against the backdrop of green tropical vegetation and a varying topography combined with a marine foreground gives the area its superlative beauty.

IUCN MANAGEMENT CATEGORY

VI Managed Resource Area

BIOGEOGRAPHICAL PROVINCE

Lesser Antilles (8.41.13)

GEOGRAPHICAL LOCATION

St Lucia is an island of 617 square kilometres between Martinique and St Vincent in the Windward group of the Lesser Antilles Islands in the eastern Caribbean. The Pitons are two volcanic cones on the southwestern coast just south of the town of Soufriere, at 13° 48'N and 61° 04'W.

DATES AND HISTORY OF ESTABLISHMENT

1986: Most of the reef system fringing Gros Piton was declared a Marine Reserve;

1994: The Soufriere Regional Development Foundation (SRDF) was founded and the Soufriere Marine Management Area (SMMA) established under the Fisheries Act of 1984;

2002: The Pitons Management Area (PMA) established under the Physical Planning and Development Act, 2001.

LAND TENURE

Mixed public (53%) and private ownership (47%). Terrestrial Conservation Areas are administered by the Ministry of Physical Development & Housing with the Forestry Department, and Marine Areas are administered by the Soufriere Marine Management Area under the Department of Fisheries.

AREA

Total 2,909 ha:

| | | |
|---------------------------------|-----------|---|
| Terrestrial Conservation Areas: | 467 ha: | 341 ha public + 126 ha private; |
| Multiple Use Area: | 1,567 ha: | 80% private, 20% public; |
| Marine Management Area: | 875 ha: | this is an 11 km x 1 km offshore strip. |

ALTITUDE

-75m under sea level to 777m (Gros Piton) and 743m (Petit Piton).

PHYSICAL FEATURES

The Lesser Antilles are the island peaks of a 700 km-long volcanic arc of 18 volcanoes, overlying a tectonic plate subduction zone. The Pitons on the southwest coast of St. Lucia are two steep forested cone-shaped mountains which rise side by side from the sea with spectacular abruptness. Gros Piton is three kilometres wide at the base, Petit Piton is one kilometre wide and is linked to it by the high Piton Miton ridge. The geology illustrates the history of an andesitic composite volcano over a crustal subduction zone. The peaks are the degraded dacitic cores of two lava-dome volcanoes probably formed on the side of a collapsed andesitic strato-volcano. They rise on the edge of the geologically complex caldera-like gravity-slide formation known as the Soufriere Volcanic Centre, and also as the Qualibou Depression, which surrounds the whole area, including the town of Soufriere. In the centre of the depression are the Sulphur Springs, a geothermal field or *solfatara* with sulphurous fumaroles and hot springs surrounded by a variety of other volcanic features - explosion craters, lava flows and deposits of pumice and ash. The area has been dormant for at least 20,000 years, though there was a blast from deep underground in 1766. If the Pitons are proved to be remnants of cumulo-domes, and not volcanic necks or plugs, which are relatively common, they would be geologically unique. The soils are skeletal on steep slopes but are deep fertile clay loam elsewhere.

The Marine Management Area is a shoreline eleven kilometres long by one kilometre wide. It comprises a steeply sloping continental shelf down to the 75m contour, with fringing and patch reefs, boulders and sandy plains. 57% of the nominated area is covered by healthy coral.

CLIMATE

The island has a moist tropical climate with a rainfall of 2,000-2,500mm. It is dry between January and April, wet in November and December. The temperature is constant at 26.7°C.

VEGETATION

The dominant vegetation is tropical moist forest grading to subtropical wet forest with small areas of dry forest near the coast and on steep slopes, and small areas of wet elfin woodland on the summits. On the Pitons especially, small undisturbed natural forests remain, preserved by the steepness of the land. At least 148 species of plants have been recorded on Gros Piton, and 97 on Petit Piton and the ridge. Many St. Lucia species are found only or mainly there. Many mosses, lichens, orchids and bromeliads thrive in the rainforest conditions. There is a relatively high level of endemic or rare species: the endemic shrubs *Acalypha elizabethae*, and *Bernardia laurentii*, found only on the summit of Petit Piton, also, on the slopes, the rare shrubs *Justicia carthaginensis* and *Piper reticulatum*, the rare vines *Gonolobus coriacea*, *Amphilophium paniculatum* and *Melothria pendula* and a herb, *Eipatorium microstemon*. There are also eight rare species of tree: one found only on the summit of Petit Piton- the pencil cedar *Juniperus barbadensis* (VU) and *Picrasma excelsa* (VU), also *Ocotea coriacea*, *Guarea kuntheana*, *Krugiodendron ferreum*, *Forestiera eggersiana*, *Randis nitida* and *Myrcianthus fragrans*.

FAUNA

Twenty-seven bird species have been recorded on Gros Piton, including five endemic birds: the St. Lucia oriole *Icterus laudabilis*, St. Lucia black finch *Melanospiza richardsoni* (EN), St. Lucia flycatcher *Myiarchus oberi sanctae-luceae*, St. Lucia peewee *Contopus oberi* and St. Lucia house wren *Troglodytes aedon sanctae-luceae*; also the white-breasted thrasher *Ramphocinclus brachyurus* (EN). There are the indigenous black-eared opossum *Didelphis marsupialis*, 3 species of bat, 3 rodents, 8 reptiles including the endemic St. Lucia anole lizard *Anolis luciae* and 3 amphibians; and many butterflies among the numerous invertebrate species which have not yet been completely surveyed.

The coral reefs are healthy and diverse, comprised of fringing and patch reefs, covering almost 60% of the Marine Management Area. A short survey to a depth of 20 meters revealed 168 species of finfish, 60 species of cnidaria, including corals, 8 molluscs, 14 sponges, 11 echinoderms, 15 arthropods and 8 annelid worms. Hawksbill turtles *Eretmochelys imbricata* (CR) are seen inshore; whale sharks *Rhincodon typus* (VU) and short-finned pilot whales *Globicephala macrorhynchus*, are seen offshore. A comprehensive survey would almost certainly reveal greater diversity.

CONSERVATION VALUE

The Pitons are a spectacular area of iconic coastal scenery and the unusually complete volcanic remains of a collapsed stratovolcano. Its highly productive subtropical wet and tropical moist forest harbours endemic species, and is fringed by a coral reef in excellent condition. The site lies within a Conservation International-designated Conservation Hotspot and in one of the world's Endemic Bird Areas and in one of the world's Endemic Bird Areas.

CULTURAL HERITAGE

Archaeological sites - megalith, petroglyphs and middens - prove the existence of an Amerindian Carib population which was displaced by Africans brought by the French who settled in the mid 17th century. In 1814 the island was ceded to Britain from which independence was gained in 1979. There was a history of slave rebellions and the Soufriere area, especially the slopes of Gros Piton, was a base camp for runaway slaves and their settlements. This, aided by the rugged topography, nurtured a local tradition of independence. There are also old plantation estates and the ruins of sugar mills.

LOCAL HUMAN POPULATION

No-one lives permanently in the PMA. The surrounding rough topography and local traditions have favored diversified medium-sized estates and small hill farms in the region. 1,500 people live within the terrestrial multiple use zone of the Management Area. There is a thriving artisanal fishery based on Soufriere.

VISITORS AND VISITOR FACILITIES

For thirty years tourism has been the only growth sector in the economy, and visits by cruise ships are a growing trend. The Sulphur Springs are the island's most visited site, averaging 200,000 visitors a year and have an excellent visitor centre and trails. The Pitons, majestic forested coastal volcanoes beside a Caribbean reef, are a natural and accessible tourist goal but walking trails are rudimentary as yet. The Gros Piton summit trail starts at Fond Gens Libres where there is an interpretation facility. Soufriere town has four resort hotels, two within the PMA, which are supportive of conservation, and several smaller hotels; also three jetties for access from the sea for cruise ships. The Soufriere Regional Development Foundation (SRDF) and Soufriere Marine Management Association (SMMA) have been established to increase community participation in developing local tourism. The SRDF office houses an information centre. There are commercial dive operations and marine tours including whale and dolphin watching. The marine area tourism is closely monitored by the SMMA.

SCIENTIFIC RESEARCH AND FACILITIES

Several recent studies have been made of the flora and fauna, terrestrial and marine, and of issues affecting the conservation of the Pitons. Species lists from these studies are given in the nomination document. A team from the University of the West Indies, St Augustine Campus, Trinidad, has studied the geology and geomorphology; the Caribbean Natural Resources Institute has supplied planning and monitoring expertise. There is a plan for comprehensive research and monitoring of key species, wildfires and visitor use. Coordination will be by the Pitons Management Area Scientific Advisory Committee.

MANAGEMENT

The Pitons are already within the borders of Qualibou National Park, the prime tourist attraction of St. Lucia, and are greatly respected for their distinctive character and as symbols of national identity. In 1994 the Soufriere Regional Development Foundation was set up to increase the area's involvement in the development of tourism. The Pitons Management Area Plan, approved in 2003, incorporates a Land-use and Management Plan for the whole site. An Indicative Land Use Plan agreed between all relevant agencies and stakeholders proposed three zones: Terrestrial Conservation Area for both public and private lands (16%), Terrestrial Multiple Use (53%) and Marine Management Area (30%). Strict controls in the Terrestrial Conservation Area were to ensure that visitors would have minimal impacts. Within the Multiple Use Zone development was to be controlled by existing laws supported by the requirement for an Environmental Impact Assessment and by detailed design guidelines to minimize the impacts of building, physical development and farming. Management of the various private lands within the Pitons Management Authority (PMA) was to be by stewardship arrangements, incentives and where necessary, through acquisition. The Marine Area was divided into five sectors: reserves, fishing priority, yacht mooring, multiple use, and shore-based recreational areas. At the time of designation there were two telecommunication towers on the tops of neighbouring hills, and 175 private agricultural holdings, comprising 68% of the property. With World Heritage status, the site was described as "the most valuable piece of real estate in St. Lucia" (Sifflet, 2010),

The award-winning Soufriere Marine Management Area Plan augmented the terrestrial plan to cover the Marine Reserve. The managing authorities were well aware of the need to finalise and enforce a land use policy with guidelines for development and to coordinate the fifteen or more different government and other organisations with authority over the area and they fully addressed these issues in the Management Plan. Coordination of planning and management was to be by the PMA Advisory Committee and of scientific work by the PMA Scientific Advisory Committee. At the time of designation fishing and tourism did not have detrimental effects and the local use of most forest resources was sustainable. In 2008 pressures for residential and tourism related development were began to grow, particularly on the coast. In response, a new Soufrière Region Integrated Development Plan was completed and was being considered by the Cabinet of Ministers for adoption within a Special Enforcement Area. This proposed five main zones: a no-construction

zone, the sulphur springs, the coast where tourism development was permitted, other lands where multiple uses were permitted, and a controlled marine zone. To enforce this effectively the site's management needed strengthening, training, and funding (IUCN, 2008).

MANAGEMENT CONSTRAINTS

A land-use policy exists but is ineffectively exercised by the Ministry of Physical Planning and Development. Despite the Integrated Development Plan and specific guidelines, the designation seems to have accelerated the sale of plots for resorts and multiple homes on the almost pristine and visually sensitive land between the Pitons. In 2008, a luxury development for foreigners, the Mignucci house, was built without approval - but also without enforcement of the law - by the Development Control Authority. In 2009 a moratorium on building was lifted, small lot sizes permitted and 114 schemes were approved at the highest level, potentially allowing the construction of several hundred additional homes, some on steep slopes. The leaders of both political parties seemed to approve of the development, and a request for a moratorium on building from the World Heritage Committee was ignored (Sifflet, 2010). The Committee became concerned that the developments were compromising the site's World Heritage status and by 2010 considered listing the site as endangered. However, the Pitons Management Area office is to become an Authority capable of imposing a single plan including development regulations and a public planning process (UNESCO, 2010).

Marine pollution by solid wastes and from eroded sediments from construction and mining are threatening coral and marine life. The government is acting to combat these. Hurricanes, dry-season fires, deforestation for timber, fuel and agriculture, livestock grazing and noise from tourist helicopters are also threats. Dry season restriction of access to prevent man-set fires, and educating local people on the values of the uncommon flora to forestall further impacts were strongly recommended by Cox (1999) but there is a lack of adequate staff and funding to maintain the Area.

STAFF

The SMMA has one Manager and five part-time specialists: Range Forest Officer, Fisheries Biologist, the Executive Director of the St.Lucia National Trust and two SMMA administrative staff. There are also 4 full-time rangers. An office for PMA is being planned. It will have a Manager, two administrative assistants and two rangers, and an onsite office will be built.

BUDGET

This is inadequate at present (IUCN, 2004). The anticipated annual expenditure for the first two years is \$162,000, initially to be supplied by the government. In the future the SMMA will also gather revenue from user fees, visitor, research and conservation operator fees, grants, donations and sales. The WWF has funded preliminary resource studies.

LOCAL ADDRESSES

Permanent Secretary, Ministry of Physical Development, Environment and Housing, Government Buildings, Waterfront, Castries, St.Lucia.

Chief Forest Officer, Forestry Department and Chief Fisheries

Officer, Department of Fisheries, Department of Agriculture, Forestry, Fisheries and the Environment, Pointe Seraphine, Castries.

Chairman, Soufriere Marine Management Association, P.O.Box 305, 3, Bay Street, Soufriere, St. Lucia.

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DATE

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