

Chief Roi Mata's Domain

Challenges facing a World Heritage-nominated property in Vanuatu

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Introduction

Earlier this year, the Republic of Vanuatu submitted its first nomination of a site for inscription on the World Heritage List, the cultural landscape of Chief Roi Mata's Domain (Vanuatu Cultural Centre 2007) (Fig #1). Together with the early agricultural site of Kuk Swamp in Papua New Guinea, this is the first cultural nomination from an independent Pacific Island state. Vanuatu ratified the World Heritage Convention as recently as 2002, and moved swiftly to produce a Tentative List of sites in 2004. The selection of Chief Roi Mata's Domain (CRMD hereafter) as the first of Vanuatu's sites for nomination reflected several factors: national and international recognition of the significance of the site, a relatively long history of research associated with the site, ease of access (the CRMD is located just half an hour by car from the national capital of Port Vila), and enthusiasm on the part of the landowning community. This paper introduces some of the key features of the CRMD, outlining the ways in which its significance is manifested and distributed across the physical and social landscapes, and then considers some of the challenges, environmental and social, to long-term management of the property.

Chief Roi Mata's Domain has been nominated as a Continuing and Associative Landscape, reflecting the ongoing significance attributed to this particular landscape by living ni-Vanuatu communities. The paramount chief Roi Mata is widely credited with a series of social innovations that laid the foundations for peaceful interaction between different settlements on Efate. His death in about 1600 AD was marked by the mass burial of more than 50 of his family and court associates on a small near-shore island, Artok (or Eretoka), which was then placed under customary prohibition or *tapu* for the following four centuries. Roi Mata's former seat at the mainland site of Mangaas (or Mangaasi) was also placed under *tapu* shortly after 1600 AD, and the two locations effectively became refuges for endemic species. Together with the location of his death, in the spectacular chamber cave of Fels (or Feles), on Lelepa Island, these sites constitute the central nodes in a landscape that commemorates Roi Mata and embodies his social revolution – a landscape encompassed within the boundaries of Roi Mata's chiefly domain.

Field surveys and meetings of landowners and other stakeholders were conducted from 2004-06, assisted by a UNESCO Preparatory Assistance Grant in 2005-05. The full nomination file for Chief Roi Mata's Domain was submitted to the World Heritage Centre in February 2007, and a decision on the status of the CRMD is anticipated in 2008. Douglas Meto Kalotiti has played a central role in this process, as a landowner of the nominated property, as chair of the Vanuatu Cultural Centre's Fieldworkers Association, which is charged with the survey and management of local cultural heritage throughout Vanuatu, and as chair of the newly formed World Heritage and Tourism Committee of the Lelepa and Mangaliliu communities. Meredith Wilson and Chris Ballard were invited by the Director of the Vanuatu Cultural Centre, Ralph Regenvanu, to lead the management and research of the nomination process, and have worked on the project since 2004.

The Constitution of Chief Roi Mata's Domain

CRMD is located in the northwest of the island of Efate, in central Vanuatu (Fig. #2). It is essentially a maritime or littoral landscape, composed of the mainland coast and the two near-shore islands of Artok and Lelepa (Fig. #3). A semi-humid climate prevails over most of Efate, with a warmer, wetter season from November to April and a cooler, drier season from May to October. The geology of northwest Efate is dominated by recent limestones and raised coral reefs. A distinctive layer of volcanic tuff present on both Lelepa and Artok provides the geological context for the development of the large chamber cave of Fels. Rich soils along the narrow coastal plain of mainland Efate, combined with an exceptionally diverse marine environment have provided the subsistence basis for a long history of relatively dense settlement.

Vanuatu lies within the relatively depauperate faunal region of Remote Oceania, and the largest terrestrial species native to Vanuatu are bats, birds and reptiles. The more significant introduced species include pigs, dogs, rats and additional reptiles. Most of the natural

vegetation of Chief Roi Mata's Domain and its buffer zone is disturbed. Formerly, the landscape probably consisted of coastal strand vegetation flanked by littoral forest, grading inland to dry rainforest. However much of the region has now been replaced entirely by either cultivation or stands of invasive species.

The property nominated for World Heritage is a triangle formed by the three principal sites of Roi Mata's life at Mangaas, his death at Fels Cave on Lelepa Island, and his burial on Artok Island (Fig #4). The surrounding buffer zone corresponds broadly to the boundaries of the chiefly domain associated with the Roi Mata title.

Chief Roi Mata might be said to exist in three different registers or genres: those of the legendary Roi Mata, the archaeological or historical Roi Mata, and the living Roi Mata. Roi Mata appears to have been one of the more senior titles associated with the arrival on Efate of new chiefs and a system of 'court' positions at about 1000 AD. The legendary Roi Mata thus probably represents the conflation of several centuries of deeds associated with successive holders of the Roi Mata title. Chiefly titles still held today in Central Vanuatu extend back in oral traditions for as many 50 generations, producing genealogies that exceed the better-known Polynesian chiefly and royal genealogies in the depth, complexity and richness of their recall.

The last holder of the Roi Mata title is the one most closely linked with legends of the invention of the matrilineal *naflak* clans and the *natamwate* peace feasts, which introduced peace to Efate after a long era of war. Following his death in Fels Cave, to which he was carried after falling ill at a feast on Lelepa Island, the last Roi Mata was carried throughout his domain and finally taken to Artok Island (Fig #5). There he was buried together with as many as 300 of his family and court retainers, some of whom went voluntarily to their deaths, while others were put to death to accompany the chief into the afterworld. Artok Island was then declared *fenua tapu*, or forbidden land, and abandoned for the next four centuries. Other than occasional visits to Artok by fishing parties, and ceremonies of respect conducted before the large headstones that marked Roi Mata's grave (Fig #6), no further use was made of the island.

These oral traditions of Roi Mata, recounted widely throughout central Vanuatu, guided anthropologist Jean Guiart in the 1950s (1973) and then his archaeologist colleague José Garanger in the 1960s (1972) to the sites of Mangaas and Artok, and to the archaeological Roi Mata. Garanger's remarkable excavation at Artok substantially confirmed the oral traditions, revealing more than 50 bodies placed around a central figure in a slightly deeper pit (Fig #7), immediately beneath the headstone identified as that of Roi Mata (Figs #8, #9) – note that the excavation failed to determine the outer boundaries of the mass grave, suggesting that there are further skeletons associated with this grave.

Garanger also excavated the other sites associated with Roi Mata, at Mangaas and Fels Cave. Roi Mata's seat at the mainland site of Mangaas (or Mangaasi) – the type site for the post-Lapita Mangaasi or Incised and Applied Relief pottery ware – demonstrated a long sequence of use of the site, culminating in abandonment after a phase which he linked with the last Roi Mata (Fig #10). Surface evidence for this last phase is still visible in the form of enclosures of coral walls, "magic" stones (Fig #11) and specific mature trees such as the giant banyan said to have been present at the dance ground of Mwalasayen at Roi Mata's time (Fig #12). Knowledge of all of these features, their significance and their associations with other, minor chiefly titles in Roi Mata's court that are held today by living people, are still retained by the descendant communities of Lelepa and Mangaliliu. Fels Cave contains an exceptional sequence of engraved and painted rock art, covering most of the period of human settlement of Vanuatu (Wilson 2002), including a late phase of linear painted black art that features large male figures. Not surprisingly, perhaps, the largest of these figures is identified in local Lelepa Island tradition as a depiction of Roi Mata (Fig #13).

More recent excavations and archaeological research by a joint VCC-Australian National University team between 1996 and 2003 (Spriggs 2006) has established a chronological horizon that correlates the date of the burial of the last Roi Mata on Artok, at about 1600 AD, with that of the abandonment of his chiefly residence at Mangaas, shortly after 1600 AD, and

with the dates for linear black rock art depictions at Fels Cave of the large male figures, between about 1400 and 1700 AD. After his death, Roi Mata's chiefly title was regarded as too powerful to be assumed by any of his descendants. There are contemporary pretenders to the title in modern Vanuatu, but none with the requisite political or social support to lay full claim to it.

Roi Mata lives on in contemporary Vanuatu as a central character in legends, in court disputes over land, and even in personal dreams. Garanger's excavation of Roi Mata's burial on Artok Island provoked enormous interest amongst the communities of Efate, the local colonial community, and archaeologists internationally, and public presentations of his results in Port Vila drew large crowds. Roi Mata featured in radio shows that told the story of his life and death, and in plays by the national theatre group, Wan Smolbag (Dorras and Walker n.d.:12). Roi Mata has emerged as a symbol of cultural heritage for Vanuatu as a nation. At Independence in 1980, Roi Mata's death and burial featured as the sole indigenous contribution to the exhibition on the nation's history held in Port Vila, and many ni-Vanuatu now identify the male figure in Vanuatu's coat of arms as Roi Mata, in his new guise as a national culture hero (Fig #14). Finally, Roi Mata has emerged as an international figure through his appearance in the US reality television show, "Survivor" in 2004, which featured tales of his exploits and visits to his grave on Artok Island, and the French reality television show "Koh-lanta", shot during 2006, which based itself at Roi Mata's residence of Mangaas.

The categories of continuing and associative landscapes appear entirely appropriate as frames for appreciating the significance of Roi Mata, the nature of his presence in sites and material traces, as well as in contemporary Vanuatu society. But the diffuse and disparate presence of this physical and social landscape presents an unusually broad range of environmental and social or economic challenges to the long-term management of the principal values of Chief Roi Mata's Domain. We address the scope of environmental challenges first, before turning to the equally challenging social and economic issues of the long-term viability of the CRMD.

Environmental Challenges

Together with the testimony of archival records and local oral traditions, archaeological excavation and geological research provide a fairly comprehensive overview of the range of potential environmental threats to the integrity of CRMD. Vanuatu straddles a particularly difficult series of environmental hazard zones, being exposed both to high levels of volcanic and seismic activity, as part of the Pacific "Ring of Fire", and to frequent tropical cyclonic activity. The global challenge of sea-level rise also takes on a special significance in an Oceanic environment.

The most spectacular and most devastating of natural hazards in the Efate region is volcanic eruption. The eruption in 1452 AD of the Kuwae volcano, located only 70 km to the north of CRMD, ranks amongst the five largest volcanic eruptions in the world during the Holocene period, and as one of only two super-eruptions, along with the 1815 Tambora event, during the last six centuries (Robin et al. 1994). Its effects were registered globally, contributing to the severe northern hemisphere winter of 1453 (Cole-Dai et al. 1997, Briffa et al. 1998). In Central Vanuatu, where there appears to have been some warning of the impending eruption, most residents of the former island of Kuwae had already fled for Efate and neighbouring islands, but the regional impact must have been colossal. The island of Kuwae was blown apart, leaving only fragments of its rim and splitting the modern islands of Epi and Tongoa. Oral traditions still recounted throughout Central Vanuatu clearly identify the eruption and describe the social dislocation that followed (Clark 1996). Interestingly, the lengthy chiefly genealogies of Tongoa locate the eruption at a depth of about 22-23 generations, less than half way back through their sequences of 50 or more generations, yielding an acceptable average generational length of about 21 years (Luders 1996). More recently, during the period from 1897 to 1980, there have been at least seventeen further submarine eruptive events documented at Kuwae (Bani n.d.).

At least five other volcanoes active during the Holocene lie within 100 km of Efate (Bani n.d.). Archaeological excavations at the Mangaas site have identified three discrete layers of tephra, corresponding to eruptions at one or more of these volcanoes that were large enough to have deposited substantial quantities of ash along the northwest Efate coastline (Spriggs 2006). The youngest ash, at about 500 BP, is identified with the 1452 AD Kuwae event, and lies above an earlier ash dated to about 2400/2300 BP, possibly deriving from a volcano on nearby Nguna Island. At the base of the cultural deposit at Mangaas, dating to the period just before 3100 BP, is an ash from an eruption that may have occurred at about the same time as the initial human settlement of Efate. This admittedly tiny sample of three tephtras over three thousand years suggests a 'ballpark' average of one major eruption in the region every millennium – but after a lapse of over 1500 years, there may be grounds for some nervousness in Central Vanuatu. The soil profile at Mangaas also contains evidence for one or more substantial tsunami events, presumably associated with these eruptions, when marked by the presence of in-washed pumice, or with submarine seismic events.

Earthquakes are an ever-present threat in Vanuatu, with an annual average of about 165 events across the country (Fowler 1984). However, loss of life is seldom severe, with 12 dead in a 1914 earthquake the highest recorded level of fatality. The impact on structures and landscapes can be more pronounced, and in the context of the CRMD, there is a particular threat posed by earthquakes to the stability of the chamber at Fels Cave. An earthquake with a magnitude of 7.3 on the Richter scale struck northwest Efate on 3 February 2002, causing part of the cave mouth and roof to collapse (Garae et al. 2006). Figures #15 and #16 show the mouth of the cave before and after this event, illustrating the scale of the collapse, with a volume of fallen material estimated at 525 cubic metres. The soft pumiceous tuff breccia in which the cave has developed is both susceptible to seismic activity and easily broken down once it falls, producing a fine powder. The 2002 earthquake provided an opportunity to gauge the impact of such events on the cave's rock art, which had previously been thoroughly documented by Meredith Wilson. Surprisingly, there was little discernible damage to the art beyond a light cover of dust, suggesting either that the art had been positioned on the more stable areas of the cave wall, or that art panels on unstable areas have already been destroyed. We know of at least one instance of prehistoric art loss, as the archaeologist Garanger (1972) had previously found art on the downward face of a large block excavated from the cave floor.

Of much greater threat to the population of Vanuatu are the frequent cyclones, most common during the period from November to April (Howorth and Green 1987, National Disaster Coordinating Committee 1987). Major cyclones have also devastated reefs, low-lying coastal areas and vegetation, as well as settlements. The three largest cyclones of the past half-century to have struck Efate are cyclones Amanda (1959), Uma (1987) and Brima (1993). Amanda reconfigured the entire western coastline of Lelepa Island, removing the beach in front of Lelepa Village and exposing raised fossil reefs. Uma stripped much of the vegetation from the trees at the Mangaas site, and led to the destruction of a giant banyan associated with Roi Mata when fire got into the leaf debris. Roi Mata's grave on Artok is situated on the most sheltered part of the island, in the centre of a former settlement that was abandoned after his burial, and does not appear to have been overly exposed to cyclone damage in the past (Fig #17 showing location).

El Niño events have the potential to produce extended periods of dry weather in Central Vanuatu, with a consequent increase in the threat of fire. The regular use of fire as part of the local repertoire of gardening techniques, especially during dry periods, can lead to major outbreaks. One such fire in late 2005 came close to crossing into the area of the Mangaas site, prompting the establishment of fire-breaks by the community.

Global warming and sea-level rise pose an obvious and perhaps inevitable threat to the CRMD, and especially to the low-lying sites of Roi Mata's grave on Artok Island and his residential home at Mangaas. There are few mitigation measures available that might realistically address this problem at a local level, while retaining the integrity of the location of the sites within their cultural landscape. The cultural heritage of the Pacific region is confronted with this threat to an exceptional degree, but the region makes a negligible

contribution to global warming and Pacific states can exert little or no influence over the major polluters.

Finally, invasive animal and botanical species pose a threat to the integrity of the CRMD, and especially to the endemic species found on Artok Island, including rare lizard and cycad species that have weathered the introduction of new competitors to the rest of the region by virtue of the customary *tapu* or prohibition on the resettlement or use of the island.

Given this daunting array of potential – and historically very real – natural hazards and threats to cultural heritage at CRMD, the relative lack of investment in monumental architecture in much of Melanesia makes obvious sense. The major threats posed to the sites of the CRMD are sea-level rise at Artok, earthquakes at Fels Cave, and cyclones and fire at Mangaas. However, the enduring integrity of each of these sites suggests that even the most substantial natural hazards of the past four centuries have not impacted too significantly on their values. Details of monitoring and mitigation measures – where these are practical or enforceable – and of follow-up survey procedures to determine the scale of damage in the event of a natural hazard are contained in the Plan of Management for CRMD (World Heritage and Tourism Committee 2007). As one example, in conjunction with the Vanuatu Cultural Centre, the Department of Geology, Mines and Water Supply has set up the nation's first sea-level monitoring stations at either end of Artok Island, allowing for regular and accurate measurement of gross sea-level change. However, to a significant extent, the requirement for mitigation is reduced through the careful location by ni-Vanuatu communities, now as in the past, of their settlements and important sites. Thus Mangaas is set back from the beach behind a raised beach ridge and with the added protection of a screen of mature trees, and Roi Mata's grave on Artok is carefully situated in the most protected location on the island.

The plans for the management of CRMD have been generated through a lengthy process of negotiation and consultation between individual landowners, the Lelepa and Mangaliliu communities, the Vanuatu Cultural Centre and other stakeholders. To a significant extent they reflect the codification and extension of existing and long-standing traditional practices that relate to the management of marine and terrestrial resources, and to the specific *tapu* prohibitions on the sites of Mangaas, Fels Cave and Artok Island.

Social and Economic Challenges

While it has proven possible, through negotiation and consultation with the local landowning community and with national authorities, to establish a series of monitoring and mitigation measures for environmental threats to the CRMD, the social and economic challenges to CRMD are in many respects more immediately threatening and more complex to address. Of these, the most challenging is the question of land.

Communities in Vanuatu generally, and those in rural areas such as northwest Efate in particular, have limited opportunities to raise cash in an economic environment increasingly dominated by cash requirements. After a long colonial period dominated by the interests of French, British and Australian planters and traders, and characterised by gross neglect of local community development and training, national independence in 1980 brought with it the nominal restitution of all lands to their customary landowners. However, in practice, little appears to have changed on the ground.

At Independence, many properties had been alienated for over a century, and determining the true customary landowners was problematic. During the colonial era, the powers of chiefs and the solidarity of communities had been broken by missionaries and colonial regulations. On Efate, Presbyterian missionaries assumed the right to anoint new chiefs, and transformed the descent of chiefly titles and their associated domains from a matrilineal to a patrilineal system, undermining the roles of traditional matrilineal or maternal clans (Facey 1981). By thus breaking the link between chiefly succession, clans and specific domains, the fundamental ties between chiefs and communities, and between communities and their lands were also disrupted. Without these connections in place, the knowledge of such matters as

oral traditions, genealogies, conservation practices and daily rituals, risked becoming unmoored from the land and lost to the community.

The principal consequence of this rupture has been the growing individualization of rights to land. In the post-independence period, this has enabled direct dealing between real estate developers and individuals, without the requirement or mediation of community sanction. A remarkable boom in land leases for up to 75 years has swept Efate and other islands of Vanuatu since 2002, fuelled largely by Australian ‘sea-changers’ seeking desirable waterfront properties (they obviously haven’t read about Vanuatu’s natural hazards). Over 80% of coastal Efate has now been leased. While the communities of Lelepa and Mangaliliu held out longer than most, the last two years have seen real estate developers negotiate leases over much of the coastal land, including the majority of the fertile agricultural land and even the few natural water sources available to the Lelepa Islanders. The powerful attraction of the beaches of northwest Efate, which have featured in American, French and Australian versions of the Survivor reality TV show, has generated intense pressure for these leases. At Vanuatu’s first National Land Summit, held in Port Vila in September 2006, Lands Department officers stated that the proceeds from the sale of leases flowed in the following proportions to different stakeholders (for South Efate during the period 2002-2006): 86% to real estate sellers, 5% to real estate agents, 8% to the state in the form of taxes and duties, and less than 1% to the customary owners (Tarosa 2006).

This situation has significant implications for cultural heritage in Vanuatu, and for CRMD specifically. Across Efate, ancestral domains have effectively been sold, the giant banyans felled, and the ancient stone walls, graves and dancing grounds bulldozed. Within the CRMD, the case of Artok, or Hat Island as it was known during the colonial period, is instructive. After centuries of abandonment since its *tapu* prohibition in the early 17th century, the island was included in the first parcel of lands sold to Europeans, in a particularly dubious transaction, in 1871. Thereafter the island remained in European hands – technically under the ownership of the Australian company Burns Philp for most of the time – until it reverted to customary ownership at Independence.

Unwilling to use the island themselves but under pressure to lease it, in 1994 the customary owners granted a lease to a speculator who claimed that she would build a resort on the island, providing employment to the community. This lease appears to have been driven entirely by the scope for land speculation as no such development has occurred since 1994, and the developer has placed the island for sale on the web for a respectable AU\$9.5 million (having secured the lease for annual payments of just AU\$2,500). However, development on Artok is now blocked by heritage protection for the island, and the customary landowners have formally requested to have the lease revoked by the Lands Department.

Our strategies for the mitigation of these social and economic challenges build upon local community initiatives, in much the same way that our recommendations for management of the landscape grow out of traditional practices that have conserved Artok Island and Mangaas over four centuries.

The first strategy is pragmatism, reflecting a healthy respect for the contending pressures on the community. The area defined as the property being nominated for World Heritage corresponds to the limits of the sites that are already effectively conserved – the island of Artok, the immediate confines of Roi Mata’s chiefly residence at Mangaas (and not the fertile plain surrounding it), and the floor area of Fels Cave and the scree slope extending from its mouth down to the sea, together with the intervening triangle of seascape (Fig #18). The broader buffer zone attempts to encompass as much of Roi Mata’s former domain as is practical. While the extent of Roi Mata’s domain essentially conforms with the traditional territory of the Lelepa and Mangaliliu communities, including Lelepa and Artok Islands and the adjacent mainland, large portions of this area on the mainland have long been under lease to ranchers and developers. The northeastern end of Lelepa has also been leased this year for resort development.

Responding to these realities on the ground, our definition of the buffer zone draws on what we refer to as the “visual catchment” of Artok Island – all those points within Roi Mata’s

Domain that are visible from the highest point on Artok (Fig #19). This image of the visual catchment, generated using Viewshed analysis in ArcGIS 9.0, show how the northeastern side of Lelepa, and the leased higher areas of the mainland as well as Tukutuku Point to the southwest are all thus excised from consideration (Fig #20). A further modification, in the form of a straight line from the southernmost point of Lelepa Island to the nearest point on the adjacent mainland, also serves to remove areas on the Efate mainland that have already been or are most likely to be leased to developers.

The second strategy has involved the search for alternative sources of income to counter the overwhelming pressure to lease land – cash-generating opportunities that build upon custom practices, such as dance, artefact production and the narrating of oral traditions. Lelepa Island was the last part of Efate to convert to Christianity, holding out until 1898, and the community has maintained a particularly strong current of interest in *kastom* since. However, many of the island's most distinctive products, such as the *napea* slit drums or tamtams (Fig #21 – photo by Gaillard in 1880 on Lelepa), tattoo designs and clubs, had met with mission disapproval and production of these cultural items had long been discontinued. Archival research located images and descriptions of many of these artefacts and practices, and a project of restitution of these materials to the community has assisted in a community-led and community-driven cultural renaissance. *Napea* slit drums have been carved again for the first time in more than a century, and are now being played on the beach at Mangaas (Fig #22), accompanying a revival in traditional dance (Fig #23).

With a newfound global audience for their landscape and culture through the three different reality television series shot within CRMD, the Lelepa and Mangaliliu communities have formed a committee to oversee their own cultural heritage tourism venture, in addition to managing their World Heritage-nominated property. The World Heritage and Tourism Committee (WHTC) is composed of equal numbers of members from the two communities of Mangaliliu and Lelepa, with the addition of a representative of the Vanuatu Cultural Centre.

Assisted by international volunteers under the Australian Youth Ambassador and Peace Corps programs, the WHTC has produced a Cultural Tourism Strategy for the CRMD (Greig 2006), drawing on the framework provided by the *Stepping Stones for Tourism* program developed by the Northern Territory Tourist Commission (Hall 2003). The centrepiece of this strategy is a small-scale community tourism business managed by the WHTC. The community now offers interpretative tours of the CRMD, with fully trained guides, followed by feasts prepared by the village (Fig #24). Benefits from the tourism business are shared amongst community members participating in the tours, with shares of profits distributed to the landowners of the sites at the end of each year in a traditional tribute or *nasaotonga* ceremony.

The mitigation of environmental impacts at World Heritage-nominated properties is a constant challenge. The tropical environment of Vanuatu's Chief Roi Mata's Domain presents a wide range of potential threats, some of which will probably exceed the capacity of a developing nation to prevent, and may also not rank as a priority. Yet, even more challenging and more immediately threatening to the property than occasional natural hazards are the social and economic challenges that accompany community ownership of the property. Vanuatu's constitution enshrines the traditional rights of customary landowners, but fails to define those rights or to regulate the identification of landowners, either as groups or as individuals. Maintaining the outstanding universal values of Chief Roi Mata's Domain will be a dynamic and open-ended process of management and negotiation involving chiefs, landowners, communities, the Vanuatu Cultural Centre and other stakeholders (Fig #25). Nor should it be otherwise, for the community, its traditions and its interpretations of its own past, lie at the heart of the cultural landscape of Chief Roi Mata's Domain.

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