



Conservation and Visitor Management Plan

Rio Grande Valley

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For

The Jamaica Conservation and
Development Trust. Managers of
the Blue and John Crow Mountains
National Park and World Heritage
Site

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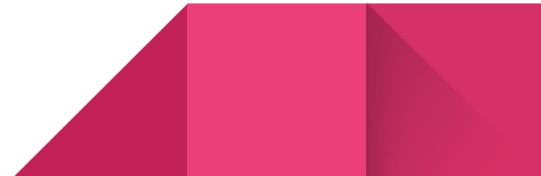


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List of Acronyms

BJCMNP	Blue and John Crow Mountains National Park
BPFA	Bowden Pen Farmers Association
CATS	Caribbean Aqua- Terrestrial Solutions
CDC	Community Development Committee
GEF	Global Environment Fund
GIZ	German Development Cooperation
JCDT	Jamaica Conservation and Development Trust
JOAM	Jamaica Organic Agriculture Movement
UNESCO	United Nations Educational, Scientific and Cultural Organization
STATIN	Statistical Institute of Jamaica
SDC	Social Development Committee

Executive Summary

International Perspective

The ability to generate income by preserving natural and cultural resources is becoming more recognizable to countries worldwide. Ecotourism promotes sustainable development in developing countries through provision of an alternative source of livelihood to local communities, usually dependent on agriculture only. Social and economic benefits are realized through the provision of nature-based activities which foster visitor appreciation and understanding of cultural and natural heritage in the host communities.

Conversely, potential negative and irreversible impacts may arise due to inadequate management of ecotourism activities from the planning through execution stages. Visitor activities and infrastructural developments within protected or sensitive areas can result in overcrowding, noise pollution, conflicts with local people or other visitors, trail/soil erosion, wildlife disturbance, improper solid waste and sewage disposal, among a myriad of negative impacts. Conservation and visitor management strategies will therefore need to be established in an effort to control eco-tourism activities.

National Perspective

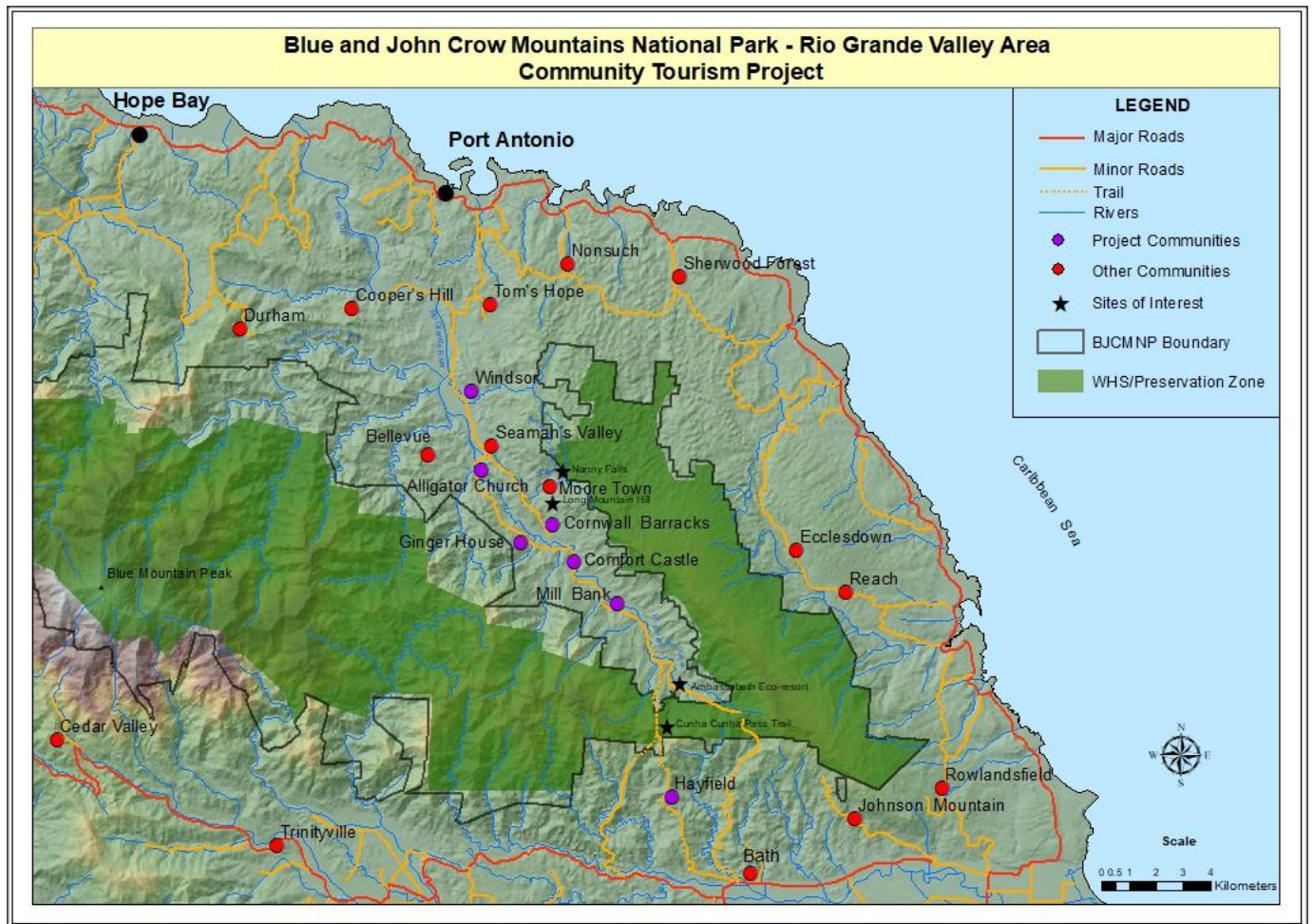
The Blue and John Crow Mountains National Park and World Heritage Site is an area of global significance for biodiversity and cultural heritage. Management includes a Recreation and Tourism Programme where ecotourism principles guide development and management of sites, in particular, local community benefits and increasing support for the preservation of both natural and cultural heritage.

Some of these sites are within the Blue and John Crow Mountains National Park and World Heritage Site (Nanny Town) and some e.g. Trails pass through the National Park's boundaries. Others are within the Community Buffer Zone of the National Park. The Jamaica Conservation and Development Trust (JCDDT) manager of the National Park and World Heritage Site is already

updating management plans for the National Park's two main recreational areas (Holywell and Portland Gap/Peak Trail). As part of its community empowerment and outreach and specifically, its facilitation of establishment and enhancement of the community tourism product around the National Park, JCDDT is preparing plans for the Rio Grande Valley as this historic and biologically rich area has great opportunities for ecotourism but little planning. With funding from the Global Environment Fund (GEF) Small Grants Programme (SGP) and also assistance from the German Development Cooperation (GIZ) Caribbean Aqua-Terrestrial Solutions (CATS) Project, the JCDDT is preparing a general and site specific plans for the management of sustainable community tourism within the Rio Grande Valley.

This Conservation and Visitor Management plan has highlighted areas within the Upper and Lower Rio Grande Valley, which have the potential or are currently engaging in ecotourism activities. Information presented, reveals current and potential negative impacts to the natural and cultural resources present. To identify the current and potential effects of the ecotourism on the locations, initial public consultations were conducted to inform and consult the public; specifically the residents immediately affected, regarding the eco-tourism activities and its effects on the physical, biological and human environments along with the effects both positive and negative on the livelihood of the communities and need for improvements. Physical assessments were also carried out at existing and potential ecotourism sites. Some issues identified were, disruption of local communities from unregulated visits, potential for unsatisfied visitors due to use of untrained tour guides, lack of adequate marketing systems for the tourism product, lack of infrastructure and the potential of exceeding tourism carrying capacity due to unregulated activities. The output from the assessment conducted were goals and objectives that will guide the planning and execution of sustainable ecotourism activities, which will aid in the socio-economic development of the communities, while preserving the natural and cultural resources present.

Overview of the area



Map 1 Map Showing Blue an John Crow Mountain National Park boundaries with key study areas and World Heritage Site Preservation Zone

General Description

The communities of the Rio Grande Valley are nestled between the Blue and the John Crow Mountain ranges, with the Rio Grande River flowing from an elevation of 914m in the Blue Mountains. Located in the Community Buffer Zone of the Blue and John Crow Mountains National Park which is a key biodiversity hotspot in the Caribbean, the region boasts a high level of biodiversity and endemism. The core, natural forest with archaeological sites has been inscribed on the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Site List for the outstanding universal value of the cultural and natural heritage. The Rio Grande Valley along with the National Park and surrounding Forest Reserves has also been designated Protected National Heritage by the Jamaica National Heritage Trust.

Communities within the Rio Grande Valley are dependent on agriculture as their main source of livelihood, cultivating crops such as bananas, plantains ginger, cocoa and coffee among others. Scenic views of mountains along trails, numerous waterfalls and rivers are some of the features that give the area its potential for ecotourism. Its Maroon history makes this area rich with cultural heritage with communities such as Moore Town and Cornwall Barracks, historic sites such as Nanny Town and historic trails such as the Cuna Cuna and Corn Puss Gap Trails. For the purpose of this Report, the Lower Rio Grande Valley comprises the more northerly communities and the Upper Rio Grande Valley, the more southerly ones. Many people are not familiar with this area, thinking only of the Rio Grande as that section of the river associated with rafting - from Berridale through to St. Margaret's Bay, and not realising how deep the valley is.

Nanny Town

Deep within the boundaries of the BJCMNP, Nanny Town is the original capital of the Windward Maroons. Archaeological digs in the 1970s support the oral history and diaries of British soldiers amongst other written records to indicate that the Taino people first used Nanny Town as a sacred site. Further, when enslaved Africans escaped from Spanish estates, they met

up with Taino who had taken to the hills around Seville. These people later moved to eastern Jamaica to make use of what we now know as the parish of Portland, which was not occupied at the time. After the English capture of Jamaica from the Spanish in 1655, they rapidly expanded the small Spanish estates into large sugar-cane plantations. In 1710 to increase the ratio of British to African, they encouraged British citizens to come and settle land in Portland. These people found the land already occupied by the Maroons with well-established fishing and farming villages. A Maroon farm in the vicinity of Nanny Town is described by British soldiers as the 'Great Plantain Walk', covering 640 acres of mixed crops, mostly plantains. When skirmishes did not cause the British to leave the area, the Maroons launched an all-out war using guerrilla tactics to secure their territory and sovereignty. Nanny Town became both the spiritual and military capital of the Windward Maroons and the British Army tried to capture it more than once, only succeeding in occupying it in December, 1734 after the Maroons had abandoned it. The British etched their conquest into a large flat-sided stone at the site and built a stone enclosure where they camped until July, 1735 when they left the site disheartened that the Maroons had not returned.

Whilst the original site when occupied by the Maroons was likely much bigger, Nanny Town today is a relatively, small triangular site on a plateau with a precipice on one side with the Stony River far below and looking out to Abraham Peak (one of the Nanny Town natural watch-towers). The other sides are thickly forested and the slope is very steep going either down or up. The trek to Nanny Town from either Durham or Windsor takes at least two tiring days along a path known only to a few Maroons. The return trip back down can take a day or two depending on the how urgent is the need to get back.

Lower Rio Grande Valley

For the purpose of this Report, the Lower Rio Grande Valley comprises the communities of Windsor, Seaman's Valley-Alligator Church Bridge, Bellvue, Moore Town and Cornwall Barracks, however only Windsor, Moore Town and Cornwall Barracks are considered in detail.

Windsor

Windsor is located within the BJCMNP Community Buffer Zone and is the first community within the Protected National Heritage. It is about 12 km from Port Antonio and 5 km from the turn-off into the Rio Grande Valley at Fellowship. The Back Rio Grande joins the Rio Grande just north of Windsor and hence this area has a large flood-plain. Windsor is a farming community with a population of about 1,207 (STATIN, 2011) although many people work in the nearby town of Port Antonio. There is an active Community Development Committee which in 2018 was awarded a grant from the Global Environment Facility (GEF) Small Grant Programme (SGP) through the Jamaica Organic Agriculture Movement (JOAM) for sustainable livelihood community projects. This grant is partly associated with a separate grant from the GEF SGP to the JCDT for sustainable community tourism planning and conservation activities.

Seamans Valley – Alligator Church – Bellevue

Seaman's Valley is a triangular area located west of Windsor across to Bellevue and down the road from Windsor into the actual community of Seaman's Valley located at the intersection of the road from Windsor to Moore Town and the road to Alligator Church. The Seaman's Valley name refers to a battle believed to have occurred at this location during the First Maroon War – around 1733, when the Maroons ambushed 200 armed sailors accompanied by 200 'baggage Negroes' on a mission to attack Nanny Town. Alligator Church Bridge passes over the Rio Grande and despite the interesting name (there are no alligators in Jamaica only crocodiles but for some reason there are a few place-names e.g. Alligator Pond) however there are no records of any crocodile sightings in the area. Bellevue is a small community above Alligator Church Bridge and about 7km away along a dead-end road although it was once connected to the now non-existent community of John's Hall by another road. These three communities form one Enumeration District with a population of 686 (STATIN, 2011).

Moore Town

Moore Town is about 16 km from Port Antonio along the Wild Cane (Negro) River. It is the last community along that road and has a population of about 1,061 (STATIN, 2011). The Moore

Town community boasts a rich cultural history being home of national heroine, Nanny of the Maroons. The signing of a peace treaty in 1740 between the Maroons and the British Government resulted in 500 acres of land being secured for the Maroons. A later request by Nanny in 1781 resulted in an additional 1,270 acres of land being allotted which was subsequently called Moore Town. The community is governed by a Colonel who is assisted by a council consisting of several members of the community.

The community has rich potential for ecotourism development, as it is well endowed with a variety of natural scenery and historic cultural monuments. These include waterfalls, hiking trails, caves, rivers, and the grave of Nanny - Nanny Bump Grave where the official, national monument to Nanny is located. Beside this monument is a plaque commemorating the inscription in 2015 of the Blue and John Crow Mountains on the UNESCO World Heritage Site List. The community also boasts the UNESCO's Masterpiece of the Oral and Intangible Heritage of Humanity, which was awarded in 2003 for their music and language.

Cornwall Barracks

Cornwall Barracks is a community along the Rio Grande accessed by the road to Moore Town but then veering south-east before entering Moore Town and going up over a hill and down towards the Rio Grande. The community has been placed in an Enumeration District with Comfort Castle across the Rio Grande (the communities are connected by a now broken swinging bridge) and together they have a population of 2,034. Comfort Castle can be estimated at just over 1,000. The community is named from the old British soldier barracks established to "keep an eye" on the Maroons in Moore Town after the signing of the Peace Treaty in 1740. The location of the former barracks is unknown.

Upper Rio Grande Valley

For the purpose of this Report, the Upper Rio Grande Valley comprises the communities of Ginger House, Comfort Castle and Millbank, the old community of Bowden Pen (actually located in the parish of St. Thomas) with its eco-resort Ambassabeth surrounded by lush forest

and farms in addition to several trails including Cuna Cuna Pass Trail which connects to the community of Hayfield above Bath, St. Thomas.

Ginger House – Comfort Castle – Millbank

Ginger House has a population of 880 and Comfort Castle about 1,000 (joint with Cornwall Barracks – 2,034) and Millbank is only 261 (STATIN, 2011). These three communities are located along the west bank of the Rio Grande below the Blue Mountains. There is a police station and a primary school between Comfort Castle and Millbank and a basic school in Ginger House. The main livelihood is agriculture with crops including bananas, plantain, dasheen and ginger.

Bowden Pen

There used to be a community in Bowden Pen and one beyond it – along the Corn Puss Gap Trail. There were also several homes along the Cuna Cuna Pass Trail but eventually younger people moved to communities closer to the town of Port Antonio and older people eventually died. The area is mainly used for farming with a number of people owning land in the area – some passed on from grand-parents who received the land as a reward for fighting in World War II. Bowden Pen is only 3.3 km from Millbank but the road is more like a trail and so the journey is close to an hour, though very scenic. This is the location of Ambassabeth, an eco-resort established by the Bowden Pen Farmers Association (BPFA) on land owned by the Wilks family (Mrs. Linette Wilks) being a founding member of the Association. There are several trails and sites of natural and cultural heritage interest in the area; of special note are the Cuna Cuna and the Corn Puss Gap Trails which cross the National Park boundary.

Cuna Cuna Pass Trail & Corn Puss Gap Trail

Located in the Upper Rio Grande Valley beyond the last inhabited town of Millbank and in Bowden Pen (a former town now over-taken by nature and used only by farmers and visitors) are the historical national monuments Cuna Cuna and Corn Puss Gap Trails. Given their knowledge of the mountains, the Windward Maroons used these escape trails to outlast the British during

periods of war beginning around 1728. After the Peace Treaty was signed the trails were used by Maroons to visit family, for hunting and eventually as a market trail connecting communities on the southern slopes of the Blue Mountains with those on the northern slopes. The Cuna Cuna Pass in particular was used for trade with vendors taking the products from St. Thomas such as red peas, sugar, coconut/coconut oil over to Portland; where dasheen, coco and yam grew more readily. Operated by the Bowden Pen Farmers Association (BPFA) with assistance from the JCDDT, hikes to both trails begin at the Ambassabeth Cabins with the option of starting the Cuna Cuna Trail from Hayfield, St Thomas. The Cuna Cuna Pass Trail spans a distance of 8.9 km with Corn Puss Gap Trail at 8 km. Along both trails there exists numerous endemic flora and fauna, along with scenic and historic waterfalls and streams such as Breakfast Spring, Three Finger Jack Spring and Quaco River. This is one of the places a visitor is most likely to see the largest butterfly in the Western Hemisphere, the six inch, endemic Giant Swallowtail Butterfly (*Papilio homerus*).

To access the Corn Puss Gap Trail – one walks along the old road past Ambassabeth and down to Quaco River about 3km. Across the river, the trail bisects – to the left (north) it takes the hiker to Sacred Site and the Quaco River Swimming Hole and to the right (south) the Corn Puss Gap Trail begins. The trail is still not yet completely renovated but the original trail has several trails adjacent to hills such as Crown Hill and can also connect to the Cuna Cuna Pass Trail. The Corn Puss Gap Trail has forest in even better condition than Cuna Cuna as it is less used and does not connect communities and these parts of the National Park are also World Heritage Site. The Corn Puss Gap Trail is an important habitat for the Giant Swallowtail Butterfly.

Hayfield

Hayfield is the small community on the other side of the Cuna Cuna Pass Trail with Maroon heritage and family connections to inhabitants of the Rio Grande Valley. Located above Bath, St. Thomas it has a population of only 277 (STATIN, 2011). Hikers on the Cuna Cuna Pass Trail either have transportation drop them off at Hayfield and wait for them or the transportation goes

back down to Bath around the coast to Port Antonio and up the Rio Grande Valley to pick them up later or the next day. Hence many visitors only pass through Hayfield briefly. Under the Windsor Community Development Committee (CDC)/Jamaica Organic Agriculture Movement (JOAM) GEF SGP funded project mentioned earlier, funds have been sourced to build a rest-stop at which hikers can obtain a meal and/or make purchases for their trek or journey back into Kingston. In addition, under the JCDT GEF SGP and GIZ funded projects, assistance is being provided to help the Hayfield group establish its own attraction separate and apart from the Cuna Cuna Pass Trail. There are two great house ruins near to Hayfield – Ladyfield and Grampian: the former is about an hour’s easy and scenic walk from the road up to Hayfield (and another hour walk up to Hayfield) and the latter is about 1.5 hour hike each way with a more difficult terrain. Both properties are in quite good condition with Grampian’s location by a river adding to its scenic qualities.

Purpose and Need

The maintenance of protected areas and nature in the surrounding buffer communities are vital to the success and sustainability of any ecotourism product. Ecotourism activities; though intended to promote the preservation of cultural and natural resources, have the potential to introduce negative irreversible changes to cultural, ecological and socioeconomic resources present if management systems are non-existent or ineffective.

Given the complex nature of ecotourism activities (Kiper, 2013), the need arises for management to consider all interests involved in tourism destinations and ensure tourism activities are adequately planned for and regulated to ensure sustainability of all tourism activities. To be more specific management of eco-tourism destinations must pay keen attention to the constant regulation of conservation efforts, the number of visitors allowed at the destination and generally maximizing profit to assist with management and conservation, while minimizing ecological impacts. Carrying out ecotourism activities in such a manner will promote sustainable development in developing countries.

The Blue and John Crow Mountains covers 41,198 hectares and is the only National Park in Jamaica. This area contains a high level of endemism for plant and animal species, scenic views, rivers and waterfalls. Another special characteristic of this location is its rich cultural value as home of the legendary Windward Maroons who still maintain their culture to this present day. In 2015, the Blue and John Crow Mountains was inscribed as a UNESCO World Heritage Site for its natural and cultural heritage. These are just a few of the characteristics that make the area an attractive one for ecotourism activities.

The World Heritage Site is located within and buffered by the National Park and the Protected National Heritage. Immediately adjacent the National Park boundaries and up to 2km away, the local communities which share the diversity and cultural characteristics of the protected area are considered the Community Buffer Zone. The approximately 50 communities with a population of just over 40,000 are the focus of the National Park's Education and Outreach and Recreation

and Tourism Programmes inclusive the facilitation of more sustainable livelihoods. The Rio Grande Valley between the Blue and the John Crow Mountains is an important part of this Community Buffer Zone as the area has also been protected for its cultural heritage. The Valley consists of the following main communities: Windsor, Seaman's Valley, Moore Town, Cornwall Barracks, Alligator Church, Bellevue, Ginger House, Comfort Castle, and Millbank. These communities have vast potential for ecotourism due to the existence of lush vegetation, numerous waterfalls, caves, rivers, scenic views, agriculture and trails that can be used for hiking. There is already some community tourism development and interest in the area with visitors coming particularly since the World Heritage Site inscription. Notwithstanding this, limitations exist that prevent these communities from exploiting this ecotourism potential in a sustainable manner. A successful ecotourism product aims to provide appreciation of nature, while ensuring economic development and preservation of the destination's natural and cultural assets. Whilst some Community Based Organizations exist, which are expected to develop and implement programs to guide ecotourism activities, they lack the financial support, cohesiveness, business acumen and infrastructure to explore the full potential of the opportunities present.

Consequently, the need arises to identify and assess the current state of tourism activities and identify areas requiring improvement. This will ensure that steps can be taken to guarantee that tourism destinations are not exploited in a manner that results in deterioration of natural and cultural resources which may be irreversible. These include waste disposal, water pollution, trail erosion, wildlife disturbance and possible disruption to local culture. Failure to identify and mitigate potential issues will not only see a reduction in the quality of the resources, but a reduction in visitor satisfaction along with reduced economic returns; all of which are critical to the sustainability of the ecotourism destinations and the wider protected areas which is considered ecologically sensitive. Management programs designed will also ensure the tourism carrying capacity is not exceeded through establishment of methods for the control of tourism planning, development, visitor use and impact. This while ensuring income generation, visitor satisfaction, community development and preservation of natural and cultural resources.

Nanny Town

Today, most Maroons consider the site a sacred site along with much of the Blue Mountains where their freedom-fighting ancestors lost their lives. Believing as traditional West and South Africans do that the spirits of one's ancestors do not live somewhere else but rather remain nearby to where they once lived, the Maroons general view is that tribute should be paid to ancestors before travelling through the forested mountains and especially the Nanny Town area.

Based on the limitations with respect to site access and sensitivity at this time and bearing in mind the detailed planning that will be needed, there will be limited focus on this site in this document and instead a separate document prepared based on additional consultations (inclusive interviews and a consultation meeting with stakeholders).

Conservation and Visitor Management Goals

GOALS

1

Natural and Cultural Resources

To preserve the natural and cultural resources in the Rio Grande valley by developing systems for the management of tourism activities.



2

Leadership

To foster cohesiveness and collaboration among NGOs, CBOs (particularly the Maroon Council) and individuals involved in the management of tourism activities within the Rio Grande Valley.



3

Visitor Knowledge and Satisfaction

To provide enjoyable and satisfactory recreational experiences through the provision of adequate infrastructure and trained personnel.



4

Community Economic Development

To ensure economic sustainability of the tourism product in communities through knowledge sharing and marketing



Existing and Potential Recreation & Tourism Use in the Rio Grande Valley

Nature/Culture Tourism

Bowden Pen Trails - Cuna Cuna Pass Trail & Corn Puss Gap Trail

Nature tourism allows for visitors to experience natural monuments such as waterfalls, mountain ranges, birds and animals while cultural tourism is that subset of tourism which involves engagement of visitors with a host community or countries culture e.g. visit sacred sites/monuments, food, and dance.

In an effort to provide opportunities for community economic development and support for conservation, the Bowden Pen Farmers Association currently operates an ecotourism resort - Ambassabeth Cabins, which includes the option to hike the Cuna Cuna Pass and Corn Puss Gap Trails. The eco-cabins currently attract international tourists, educational groups and local visitors. Having the potential to host a maximum of 28 visitors for lodging; the location also includes a visitor center containing interpretive exhibits and educational literature on the flora and fauna in the Blue and John Crow Mountains National Park. Visitors can take the short walk behind the cabins, down to the Rio Grande for a dip or just to relax beside the river although there is no “swimming hole” here. Visitors are also allowed to immerse themselves in the rich cultural history of the location and surrounding communities to include traditional foods, historical stories, and dance. The historic Cuna Cuna Pass Trail is an 8.8km mountain trail, which was first used by the Windward Maroons with the Corn Puss Gap Trail also at a distance of 8km. Trail hikes include an informative tour of the rich biodiversity, culture and the importance of conservation practices. An annual event – Ancestral Memories - is hosted on Emancipation Day (1st August) and this features traditional food, music, drumming and dancing as well as trail hikes and river walks.

The hike to Corn Puss Gap from Ambassabeth cabins can take an average of 3 ½ hours, with an abundance of fauna and flora present. Corn Puss has trails leading northwards over the hills to Portland, and several trails to adjacent hills such as Crown Hill, surrounding the gap. The current use of the trail leads to the Quaco River (Photo 1) and “Sacred Site” where there are large sugar-cane processing artefacts and the opportunity to swim in a deep pool with small waterfalls. There is also the option of visiting the Quaco Cave before returning to the cabins. Hikes along this trail expose visitors to many plant species, some used as herbal remedies over the years. Lumber trees such as the West Indian Cedar, Spanish Elm, and Blue Mahoe are present along this trail. This area is also the habitat for the Water Mahoe Tree (*Hernandia catalpifolia*) and the endangered and beautiful Giant Swallowtail Butterfly, whose caterpillar feeds on the leaves of this tree and no other. Visitors may observe this species during its season (particularly in the summer). Other species that may be sighted include the endemic Black-billed Streamertail Hummingbird, Jamaican Woodpecker, Jamaican Tody, and the threatened Black and Yellow-billed Parrots.

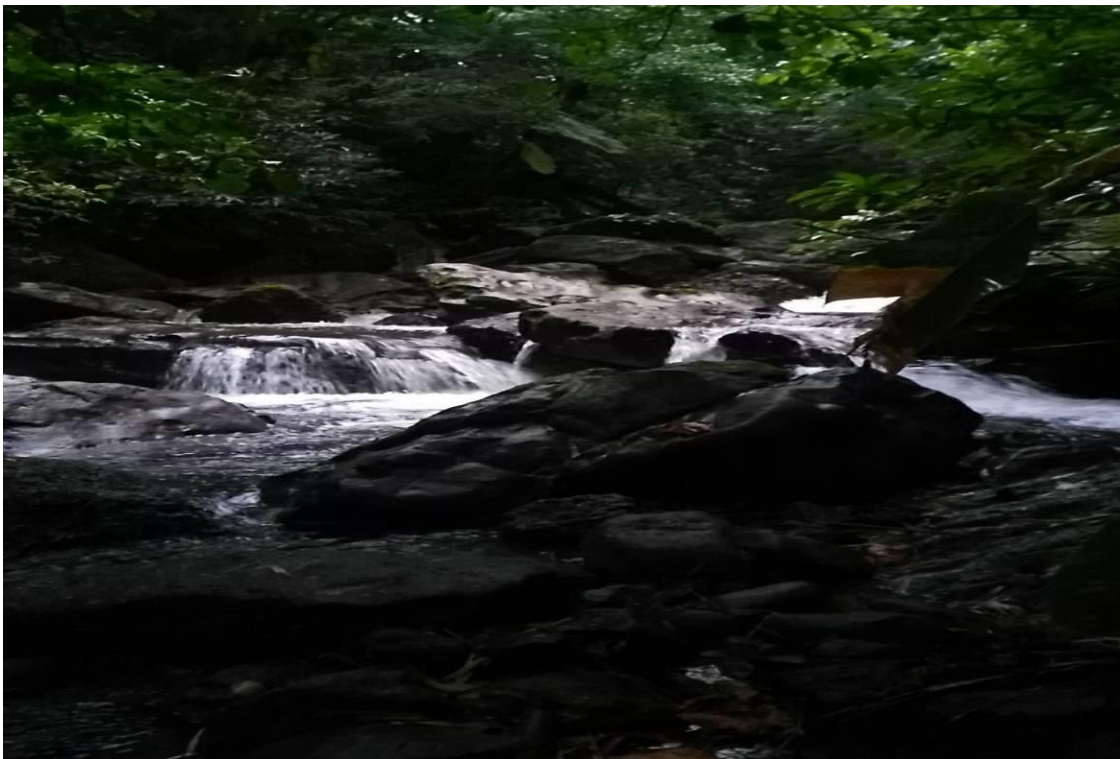


Photo 1 Quaco River on Corn Puss Gap Trail

The Cuna Cuna Trail provides a linkage between the parishes of Portland through Bowden Pen and St. Thomas at Hayfield. This trail also possesses rich cultural and natural heritage, being the site of intensive battles between the British Colonists and the Maroons. Visitors have the option of entering this trail from either the Hayfield or the Bowden Pen Community, where the hike begins on the Rose Apple Trail from the Ambassabeth Cabins. On traversing this trail visitors are exposed to the history of the Maroons as well medicinal and other plants existing along the trail. Of particular note are the Cacoon vines which are of particular significance to the Maroons because of the plants' many uses. Visitors choosing to enter from Hayfield in St Thomas have the option of returning along the trail to Hayfield, arranging for transportation to pick them up at Ambassabeth or to overnight at Ambassabeth cabins.

On the 2.5 hour (or more) drive to Bowden Pen to get to the Ambassabeth cabins and the Cuna Cuna and Corn Puss Gap Trails and other attractions from Port Antonio, one passes by several sites of historic interest and natural beauty. These could provide for stops which take the day with the visitor getting to Ambassabeth for dinner or just for short photo-opportunities. The road passes by the historic Seamans' Valley and traverses the Alligator Church Bridge with its dramatic, large rocks. Ginger House has great swimming and relaxing opportunities along the Rio Grande Valley at Broadstone (Photo 2) in addition to short walks to springs, streams and waterfalls including Annie River Three Stone where the river passes three huge rocks. Comfort Castle community has an individual establishing an entertainment centre on the river bank which will likely have a sound system playing. Millbank has access to the Rio Grande behind the Community Centre which has space for games e.g. football and cricket as well as being the location of the agro-processing centre being established (Photo 3).



Photo 2 Broadstone Beach



Photo 3 Millbank Community Centre

Windsor, Moore Town, Cornwall Barracks

Local Tour companies such as the Kromanti Group and the Granny Nanny Cultural Group, currently offer guided tours within the Moore Town community and neighboring communities such as Cornwall Barracks and Ginger House. In addition, the JCDDT directs interested visitors to the Colonel of Moore Town for tours. These include but are not limited to hikes to Nanny Falls (Photo 4) and Quao falls, viewing of the Nanny Bump Grave (Photo 5), trails to nearby rivers and caves such as “Rat Bat” Cave and the Cestern Spring waterfall (Photo 6) in Cornwall Barracks. The gateway community of Windsor also offers guided tours on the Rio Grande River which may lead to Nanny’s Watch Hill (Photo 7) and with occasional hikes to waterfalls such as Tenants Fields and Chocolate Walk. Visitors also have the option of trekking the Guava River trail which leads to a hot spring and along Wild Cane River to an area known as Mango Hole. Tour operators such as Kromanti Group and the Granny Nanny Cultural Group will include the option of a native meal included in the packages.



Photo 4 Nanny Falls- Moore Town



Photo 5 Nanny Bump Grave - Moore Town



Photo 6 Cestern Spring Waterfall Cornwall Barracks



Photo 7 View of the Rio Grande Valley showing Nanny Watch Hill

Moore Town which is the home of the national heroine Nanny of the Maroons has a small, community meeting room and Visitors' Center which includes exhibits and some interpretive features of Maroon heritage. Tours of the Visitor Center are guided by the Colonel or designate (usually a Captain), who also guides tours to the nearby Nanny Bump grave and Nanny Falls. Along the trail to Nanny Falls is a neighboring trail which was identified as a potential for the viewing of the endemic Jamaican Hutia/ Coney. Other activities include visits to archaeological sites where Maroon villages existed. An annual cultural event Nanny Day Celebration is held in Moore Town on National Heroes Day in October. There is traditional food, music, drumming, and dance in addition to a variety of guest speakers. In the evening there is usually a dance with currently trending artistes, which is very popular with the neighboring communities.

A new opportunity was identified during the study period, when a site assessment was conducted for a proposed reforestation/agro-forestry project. The location is the Long Mountain Hill which is a low hill located between the road to Cornwall Barracks and the Rio Grande. This is Maroon community land and currently not in use however it has great opportunities for ecotourism as the hike is only about 3 hours round-trip and is relatively easy, with most of the journey on the hill-top plateau. There are exceptional views of the Rio Grande Valley including communities; historic sites e.g. Woman Town, Cunha Cunha Pass and Corn Puss Gap as well as the Rio Grande itself in addition to views out to sea. The trail passes through sites once occupied by houses of Maroon community members, old pasture land, Rose-Apple and Cacao grove and secondary forest including native and endemic tree species and the original Taino pineapple. The addition of agro-forestry at the currently deforested plateau will enhance tourism with trees that provide shade and attract birds as well as the opportunity for tasting a variety of fruit in season. Further, the fruit can be sold to visitors and/or to the agro-processing plant in Millbank.

Nanny Town

The Trail to Nanny Town (really little more than a route known by a few Maroons) and Nanny Town itself was rarely visited by anyone apart from Maroon Hog Hunters due to the steep and treacherous nature of the route and the belief that the spirits of the ancestors should not be disturbed. This remained the status quo- until the interest shown by Archaeologists first in the 1970s and then the major expedition by Kofi Agorsah with the University of the West Indies in the 1990s. There was apparently significant discussion amongst the Maroon community regarding the permission for this archaeological research to occur. Following this research, the trail and area were hardly visited until a few visits in 2014, associated with (i) the Nanny Queen of the Maroons documentary produced by two descendants of Maroons now based in the USA and (ii) the World Heritage Site evaluation. The trail is only known to a few Maroons from the Windsor area who seldom take visitors – an average of two per year. A recent expedition to explore the potential of a trail hike to Nanny Town as a Backcountry experience was undertaken by avid hikers Adam Hyde, JCDT and Dr. Ryan Utz, Chatham University, USA. The report

produced as a result of this expedition indicated that the hike to Nanny Town will take up to three days through heavy forests and deep valleys and recommended this trail be guided by residents familiar with the trails- preferably hog hunters - as they are familiar with the steep slopes and routes across potentially dangerous rivers such as the Stony and Corn Husk Rivers. While attraction features are minimal, the initial entry to the location has an abandoned village - Johns Hall, the Macungo level which is said to have been a Maroon Plantation and a stone wall enclosure along with carvings on stones which were said to be left by inhabitants.

Hayfield

Whilst not yet up and running – the Hayfield Community Development Committee is currently working along with the members of the community to develop two nature trails which will lead to heritage sites – Ladiesfield (Photo 8) and Grampian Great Houses Photo 9). Preliminary visits to assess site potential revealed that the Ladiesfield Great house and trail has an easier terrain and will take the least infrastructural work to become market ready; while the Grampian (plantation ruin and river requires significant amount of work to improve/create access trails without having serious negative environmental impacts.



Photo 8 Ladiesfield Great House- Hayfield



Photo 9 Grampian Great House- Hayfield

Agro- Tourism

Agro-Tourism is a sub-set of cultural tourism which allows visitors the experience of agricultural life for the purpose of enjoyment (Petroman and Petroman 2010). Visitors are engaged in activities such as touring farmlands, observation of cultural farming practices and assisting with farming activities if they so desire. These activities are intended to allow the visitors a closer connection with nature while contributing to the sustainable environmental, economic and social development of the host communities. Activities may include outdoor activities such as fishing and livestock/crop care, educational tours through processing facilities or farm and lodging/camping on farms.

Agriculture is the main source of livelihood for communities within the Rio Grande Valley, with crops such as bananas, plantain, ginger, dasheen, coco, yam, breadfruit and coffee being cultivated. This gives the area potential for the exploration of agro-tourism. Currently, the Rio Gran Health Farms tour – operated by a community member, offers a farm tour in Windsor; which is the gateway to Moore Town, Cuna Cuna Trail, Corn Puss Trail, and Nanny Town. The

tour allows visitors to explore organic farming practices, understand the cultural heritage of the Maroons along with providing an insight into the history and development of the area since colonial times. Visitor numbers are reported by the operator to be inconsistent, but have however hosted in the past a maximum of sixty (60) visitors. The tour offers amenities such fully equipped dormitories which are able to host up to twenty-five (25) visitors; with the option for outdoor camping. Tour operator also offers the option for picnicking on the Rio Grande River floodplain, with activities offered such tubing, rafting, fishing, and stilt walking. Additionally, University groups to the Ambassabeth Cabins are also exposed to agro-tourism as farms exist along the entryway to Cuna Cuna trail (photo 10) and the Bowden Pen area. Students and other visitors may from time to time during visits to farms offer to volunteer with farming activities or learn local food preparation techniques. Mention must also be made of the Millbank community center which is currently being refurbished to accommodate a small dried fruits processing plant; which will form part of their agro-tourism product.



Photo 10 Farm along the Cuna Cuna Pass Trail

Issues Surrounding Visitor use and Management

Infrastructural Limitations

Visitor satisfaction contributes significantly to a successful ecotourism product. The inability to provide basic amenities such as functional sanitary facilities, food, potable water, rest stops and safety features along trails will ultimately lead to a reduction in tourism numbers in these locations. While numerous potential and existing tourism sites exist such as Nanny Falls trail, Watch Hill trail, rafting/picnicking along the Rio Grande Valley; the provision of the basic amenities mentioned are minimal. There exist no sanitary facilities along the Nanny Falls Trail nor at Nanny Falls, with the closest located at the Moore Town Visitor Centre which is approximately forty-five (45) minutes walk from the location of the Falls. Failure to provide these amenities will ultimately result in disposal or discharge of waste directly into the environment. The same exists for sites in Cornwall Barracks and Hayfield.

The locations being assessed are located at an estimated range of 15- 25 km with an average range of 30 min– 2 hour drive from Port Antonio which is the nearest town. Visitors may therefore seek the option of lodging at these locations after the day's activities, or to give the option of spending more than a day exploring the region. While some residents have offered and do make provisions for Bed and Breakfast there is limited available legally approved lodging facilities for visitors who choose to overnight. This may deter visitors - especially those travelling from overseas or outside of Portland parish, from visiting some locations or selecting sites without access to lodging facilities.

Since eco-tourism destinations are usually found in remote areas, visitor safety and security becomes a paramount concern. Adequate maintenance and absence of infrastructure ensuring visitor safety were evident in locations currently offering ecotourism services. The absence of security features such as handrails, drainage, steps etc. was missing from some important areas along the trail to Nanny Falls in Moore town. The trail to Nanny Falls also showed signs of land slippage with no re-enforcement or repairs being carried out to the areas (photo 11).

Additionally, steps leading down to Nanny Falls were in a state of disrepair and pose a significant risk to visitor safety (photo 12) Whilst there are plans to do repairs, the funding has not yet been sourced.



Photo 11 Land slippage along trail to Nanny Falls



Photo 12 Deteriorating steps leading down to Nanny Falls

In the event of accidents due to natural disasters, lack of or faulty safety features, access to health services is extremely limited; as no first aid facilities nor trained first aid attendant exist locally. While the closest hospital lies within 25km of the location, travel time may exceed 1 hour due to road/trail conditions if causality takes place at the actual fall. Communication services are also limited in some areas which also pose a risk to visitor safety in the event of health or security incidents that may arise.

Improvements to the visitor center used in current tours are currently required, as some parts of the building lie in a state of disrepair, with artifacts and other interpretive displays damaged or unprotected.

Trails

Corn Puss Gap Trail

The Corn Puss Gap Trail currently has no bathroom facility present along the 5-mile trail. Maintenance and absence of critical safety infrastructures such as handrails and steps was also evident along the trail. Descent to Quaco River is in need of carved and reinforced steps to ensure visitor safety. In the event of accidents to visitors due to natural disasters or otherwise, access to health services is extremely limited, as no first aid facilities exist locally. The closest hospital lies within 25kms of the location, while this may seem a short distance, travel time may exceed 2 hours due to road/trail conditions.

Muddy areas along the trail (photo 13) required some “hardening” e.g. gravel and in some areas retaining walls or alternate structures to prevent excessive soil erosion/compaction and land slippage which may occur as a result of visitor trampling during wet periods. There appears to be a need for improved drainage along the trails, as soil erosion from water runoff is also an issue of concern and was evident along the trails. Trail maintenance activities are carried out as a corrective action to damage caused by inclement weather conditions and not due to a documented maintenance programme.



Photo 13 Muddy Areas along the trail requiring "hardening"

Cuna Cuna Pass Trail

The Cuna Cuna Pass Trail currently has two rest stops with available bathroom facilities, first at about 20 minutes into the trail hike and the next at Contingent before descending to the Hayfield stretch of the trail (photo 14). However, while the first rest stop received some improvements the second is in a state of disrepair. Consequently, the facilities are unable to service visitors taken on these hikes which may last for up to three hours. While it was evident that some maintenance activities were being carried out on walkways, rails, and steps, they were done as a result of damage done due to heavy rainfall. There exists no maintenance programme for infrastructure along the trail. A few high-risk areas were also missing handrails, adequate drainage, and steps. Land slippage was evident in some areas along the trail. The tour guide advised that land slippage occurs at the same locations during heavy rainfall and plans were in place to re-route the trail to different areas on the hillside. These areas, however, lacked reinforcement to prevent land slippage along with ditches to promote proper drainage.



Photo 14 Bathroom and rest stop on Cuna Cuna Trail

Nanny Town Trail

Utz and Hyde (2017) highlighted that no established trail exists on the route to Nanny Town and would require some amount of infrastructural development such as soil retention mechanisms, cable crossing for rivers and trail developments as none currently exists. The absence of this infrastructure will result in visitors being exposed to potentially dangerous encounters in the event of river flooding or land slippage. Additionally, hikers would have no access to sanitary facilities during what may be a two day venture. Interviews with hikers and community members revealed that there is an aversion to allowing a large volume of visitors to the area and recommendations were made to allow an average of 10 visits per year if the area is to be advertised as an option for touring. One rationale for this suggestion was the absence of safety features and infrastructure along the trail with minimal attractions.

Visitor Satisfaction/Visitor Knowledge

Conservation of natural and cultural resources - while inherent for some visitors, this component will need to come through the implementation of conservation strategies by the relevant community groups within the tourism destination. Therefore, educating visitors and community members is important as it ensures visitors understand their potential impact on the environment and will ultimately promote the reduction of negative environmental impacts such as waste disposal, water pollution, unregulated habitat alteration and community disruption. Another important component is the understanding visitor preferences which seek to ensure visitor satisfaction and safety.

Along the Cuna Cuna and Corn Puss Trails the tour guide advises visitors of the requirements for environmental protection and is very knowledgeable of the cultural and natural history of the paths along with species of flora and fauna present. However, the trails could accommodate additional educational and interpretive signage in the event visitors are unable to keep up with the guide. There are a few signs at the start of the trail, particularly on the Hayfield side, but they

are in poor condition and in need of replacing. Utz and Hyde (2017) expressed concerns of invasive species such as wild coffee (*Pittosporum undulatum*) which can also be spread through the creation of trails, and recommended that trail development includes educational material stating the threat of species along with recommendations for management actions to prevent further proliferation. Additionally, the need exists for warning signs along trails for dangerous areas.

While farmers in the Upper Rio Grande Valley received certification from the Tourism Product Development Company (TPDCo) in tour guiding, this took place over ten years ago with farmers in the BPFA receiving training over three years ago. No known training activity has taken place in the Lower Rio Grande Valley. Consequently, untrained guides are responsible for offering tours in the multiple groups present in each community; this along with inadequate signage and interpretive features will lead to inconsistent or no information relating to conservation of natural and cultural resources being disseminated to visitors. To ensure visitors have a clear understanding of the existing natural and cultural resources and methods to protect them, adequate regulatory, educational and interpretative signage must be present throughout selected eco-tourism sites along with facilitating the recruitment or training of tour guides.

Adding to the absence of trained guides, there currently exist no organized platform for understanding specific visitor requirements as it relates to what they desire for recreational activities, provision of infrastructural and recreational amenities along with visitor ability to safely explore different recreational areas within communities. The need exists, therefore, for all communities to collectively determine methods of identifying visitor requirements; both new and existing, which will involve understanding clearly the needs and expectations of visitors. This will ensure a sufficient foundation is established which will allow for visitors to remain satisfied and build a culture of continuity with locations visited. Some requirements may include, wildlife viewing, sighting rare animal species, visiting archaeological sites, bird watching, interpretive/learning experiences, discovering local culture and food, lodging etc. Visitors should also be briefed on areas to be visited and potential safety, security risks to be considered.

Evaluations can also be done to assess visitor satisfaction with the service and amenities offered which will aid in continual improvement of the tourism product in each community.

Waste Disposal

Successful and sustainable tourism involves the provision of clean, unpolluted areas for recreational activities. A current challenge existing in the Rio Grande Valley is the lack of acceptable methods of waste disposal such as a central waste disposal area or consistent servicing from the municipal garbage disposal company. Interviews with local tour guides and community members revealed that waste disposal is a significant issue within the communities of Moore Town and Windsor as the municipal collector visits are infrequent. Some community members e.g. in Ginger House reported that garbage collection did not occur. While some farmers may re-use portions as organic waste periodically, non-biodegradable waste such as plastic, glass, and metal are seen in locally created areas. The introduction of visitors to these areas will ultimately lead to uncontrolled waste disposal, as no mechanism exists for consistent solid waste control.

Need for Improved Management Structures/Systems

Given that ecotourism is a highly complex activity, lack of effective planning for eco-tourism activities may ultimately result in deterioration of the natural and cultural environment, along with significant negative social and economic impacts. Considerations must be given to the management of visitor numbers, management of development activities to reduce environmental impacts and benefits that will be realized by the communities for future sustainable development. Establishing and maintaining relationships between community-based organizations and relevant institutions will also improve the quality of the eco-tourism projects. Within the Rio Grande Valley, there exist community-based organizations (CBOs), tasked with the responsibility of guiding the eco-tourism activities within the communities. Within the Rio Grande Valley the Windsor Community Development Committee and the Moore Town Maroon

Council are the existing community-based organizations, tasked with the responsibility of guiding the eco-tourism activities within the communities, while The Bowden Pen Farmers Association has taken on the responsibility for managing visitation to the Corn Puss and Cuna Cuna Pass Trails. The Hayfield Community Development Committee is working towards implementation of sustainable community tourism.

While multiple CBOs and tour guides exist in the Rio Grande Valley the capacity of members to administer relevant services such as tour guiding, marketing of tourism activities, first aid services, hospitality, food and beverage management and food safety are limited. Consequently, visitor safety and satisfaction may be at risk due to the inability of the groups to plan for and execute viable, enjoyable and safe services to meet both visitor and regulatory requirements. Better collaboration, coordination and sharing of resources are to be encouraged. Additionally, while steps are being taken by each group to develop programs to guide ecotourism activities, the absence of cohesiveness within communities and inadequate planning for eco-tourism activities pose a significant risk to the current tourism activities being undertaken.

The location of sites within the Upper and Lower Rio Grande Valley are such that visitors will need to cross community boundaries from time to time, or may desire a trip to all sites within a visitation period. The need arises, to ensure all existing organizations align their management activities to plan for and control visitor activities while ensuring the sustainable use of natural and cultural resources.

Aligning management structures and establishing a comprehensive management plan across CBO and with the National Park management will allow funding and private agencies a foundation on which they may offer assistance. This might include viable investments for development of critical areas such as sustainable infrastructural planning and development, capacity building and marketing of ecotourism activities. Additionally, regulatory agencies will gain more confidence in approving ecotourism activities for local and international marketing.

Unregulated Tourism

Unregulated tourism can arise due to the absence of management structures and can have adverse negative impacts on biodiversity, cultural identity and economic development within an ecotourism destination. While ecotourism aims to encourage visitors to appreciate the natural and cultural heritage along with providing economic returns, failure to manage the activities leading to this may prove detrimental to both the natural environment and socio-economic well-being of the communities involved.

Within the Moore Town community, organisations such as the Jamaica National Heritage Trust, African Caribbean Institute of Jamaica, JCDDT and the Maroon Council all play a role in organizing tourism activities within the community. Upon evaluating the existing uses of the recreational areas within the Rio Grande Valley, however, it was noted that numerous tour operators exist within and outside of the community. These tour operators may not go through the required channels to schedule visitation as such a channel if it exists is not clear. This poses a challenge for the regulation of visitation and visitor numbers within the vicinity. There is also the challenge of lack of cohesiveness between the communities along with the absence of tourism plans which will also contribute to unregulated and unwelcomed visits to the destination. Consequently, the carrying capacity of the areas may be exceeded on each visit. Additionally, being unaware of local practices – due to use of inexperienced and untrained guides or travelling without prior approval may result in ventures to areas deemed culturally sensitive to the Maroons. This could also be seen as a threat to the cultural heritage or an invasion in their ancestral home. Members of the Moore Town community have expressed their displeasure with neighbouring communities and external tour companies planning and executing visits without prior notification or approval, to visit areas such as Nanny Falls, caves, trails and also Nanny Town. The concerns expressed were disrespect for cultural heritage, visiting of areas deemed culturally sensitive and little or no economic returns to the local community for development of the ecotourism product.

Natural Heritage Conservation and Environmental Management Concerns

There should be a symbiotic relationship between ecotourism and conservation efforts (Boley and Green 2016) to ensure the main objectives of ecotourism are met. The quality of natural resources that comes from conservation efforts will ensure the ecotourism product being developed is more competitive and economically beneficial to the local community and destination country. Given the limitations mentioned above, conservation efforts will be fruitless unless management plans are established and implemented to combat unsustainable practices. Considerations must also be given and plans put in place for potential damage that may be done to areas due to natural hazards, which are becoming more frequent due to climate change.

While an objective of ecotourism is to promote the conservation of natural and cultural resources, unmanaged activities will have potential negative irreversible effects on the physical environment. Eco-tourism development requires infrastructural development/improvements, visitation to ecologically sensitive areas and use of water resources. Unregulated and unplanned eco-tourism activities will usually lead to unsustainable land use practices, waste disposal, soil compaction, soil erosion, water pollution, removal of native and endangered species among other negative impacts that come as a result of exceeding the physical carrying capacity of an ecotourism destination. Sites such as the Cistern Spring Waterfall and the “Rat Bat” Cave in Cornwall Barracks, Broadstone Beach and Annie River in Ginger House will require strict monitoring to ensure that negative impacts that arise as a result of tourism activities are controlled to ensure sustainability of the tourism product and the natural and cultural environment.

The Cuna Cuna Pass, Corn Puss Gap and Nanny Falls trails are experiencing soil erosion and land slippage due to heavy rainfall. Land slippage was also evident along the access road from Moore Town to Cornwall Barracks. Additionally, some amount of soil compaction and root exposure was evident on trails - due to inadequate infrastructure to ensure stability. Consequently

there may be damage soil structure along with plants that serve as habitat or source of food to endemic species. Given the abundance of endemic plant and animal species within the Rio Grande Valley and along these trails, unregulated visitation may also lead to deterioration of these resources through the introduction of invasive species or extraction of endemic species by uneducated or unmonitored visitors.

Hyde and Utz (2017) identified numerous areas of concerns for natural heritage and environmental management in and on the route to Nanny Town. Their report highlighted that while there is potential for a unique attraction due to the cloud forests, endemic species and vast biodiversity, considerations must be given to maintain the ecosystems protected by the BJCMP as there exists minimal degradation in these ecosystems. The absence of an established route will lead hikers through rainforest covers and steep slopes with unstable substrates which lead to some level of land slippage or erosion which was observed by the hikers during their expedition. This will require stabilization structures to prevent soil erosion. While lands were observed which were cleared in the late 20th century for agriculture, little evidence was seen of current encroachment on the route leading to Nanny Town. The spread of invasive species such as wild coffee (*Pittosporum undulatum*) and Bamboo (*Bambusa vulgaris*) were observed in high elevation areas with *P.undulatum* forming dense areas and being spread by birds that feed on berries. Interviews with Maroons also expressed the concerns of invasive species being introduced to the area by potential hikers.

The initial ascent through Windsor into Johns Hall require river crossings through the Rio Grande River with additional river crossings further on the trail through the Stony and Corn Husk Rivers. Considerations must therefore be given to the modifications or infrastructural developments that may have to be undertaken and the potential effects to the rivers to make these areas passable in the event rivers are in full spate. The potential for exploring camping along areas of the trail was also mentioned in the report. However, considerations must be given to the management of visitor activities such as waste disposal and extraction of flora and fauna from the surrounding areas. Conversely interviews with locals revealed positive impacts may arise from introducing monitored visitation to the areas which include the possibility of increased

monitoring of physical and climatic changes in the area along with monitoring of changes in habitats of flora and fauna; which will come through the creation of tourism management plans.

Cultural Heritage Preservation and Socio-cultural Concerns

Cultural heritage provides an identity for people within a community and contributes to both social and economic cohesion. When combined with natural resources, a valuable ecotourism product is created which fosters economic development both through the creation of employment opportunities and allowing visitors become knowledgeable of local culture through provision of craft, food, music and sharing of historical facts. Communities within the Upper Rio Grande Valley are known for the rich cultural heritage of the Windward Maroons, which used the forests to successfully defeat the British. Many people currently residing within the communities are still of Maroon ancestry and retain traditions such as dance, craft making, use of herbal remedies and music for both relaxation and a source of livelihood. Some community members, particularly elders were concerned about traversing of sacred sites including Nanny Town and the use of caves without the proper respect being first paid to the Ancestors. Community members were more comfortable with use of areas closer to the communities rather than deep in the forest.

The music of the Moore Town Maroons has been recognized by UNESCO as a "Masterpiece of Oral and Intangible Heritage". The conservation of both cultural and natural heritage therefore becomes vital to the sustainability of the ecotourism product and overall social development within the community.

The involvement of local community members is essential due to their intimate knowledge of the surrounding ecosystems and will maximize economic returns to the local community; as income gained will be directly be re-invested in community development and individual livelihood. However, all communities assessed have voiced the concern of migration of the younger generation from the communities to access employment opportunities overseas and the

corporate areas. Community leaders have advised that due to the inability of the younger generation to see the full potential of tourism in the communities along with lack of interest, they have sought alternative sources of income. Consequently, the critical services such as meal preparation, tour guiding, marketing and visitor lodging may need to be outsourced to external suppliers. Interviews conducted revealed that there are positive benefits to be realized by the communities if younger generations are made fully aware of and appreciate the importance of and the benefits to be derived from their natural and cultural heritage. Community members therefore need to be educated on the potential for income earning opportunities that will arise from activities such as; guiding tours to hiking to areas such as Nanny Town, Nanny Falls, Cuna Cuna and Corn Puss Gap Trails, providing meals such as wild hog meat and supplying farm/medicinal products and craft for sale to visitors.

Considerations will also need to be given to the current livelihood practices within the communities. The communities within the Rio Grande Valley are heavily dependent on agriculture as a source of income. Crops such as coffee, bananas, plantains and coconuts are heavily cultivated in the region. Potential and existing destinations fall within the vicinity or are located beyond lands currently farmed; the visitors are therefore required to traverse land under production. Additionally, numerous small grocery stores, shops and concessionaires exist within the communities. Collaboration between tour operators and community members will therefore be necessary to ensure no conflict occurs and there is minimal disruption of current activities or competition which may result in economic loss.

The current challenges faced with unregulated tourism may result in the social carrying capacity being exceeded due to ecotourism activities and a resulting deterioration of the resources through community disruption, tampering with sacred sites among other activities deemed to have a negative impact on local culture.

Conservation and Visitor Management Recommendations

Sustainable tourism can contribute to the development of rural communities, through provision of income earning opportunities for members of the host community. Ecotourism allows for income generation, while preserving the natural and cultural resources through education and employing suitable resource management practices. Within the Rio Grande Valley, a myriad of opportunities exists for income generation through tourism whether it be ecotourism, agro tourism, community or nature tourism. Notwithstanding this, the activities introduced may have negative irreversible effects on the natural and cultural resources which they depend.

Currently, tourism activities are being offered such as trail hikes, farm tours, and visits to cultural sites. However, these activities are unregulated in some instances- such as those offered in Windsor and Moore Town, while others require some amount of improvements- trail hikes on the Cuna Cuna and Corn Puss Gap. Consequently, goals have been created which will guide improvements in all areas of concern and make recommendations which will ensure that ecotourism activities are carried out in a sustainable manner.

Goal 1

To preserve the natural and cultural resources in the Rio Grande Valley, by developing a system for the management of tourism activities.

Firstly, the carrying capacity of current and sites will need to be determined in an effort to control visitor numbers in each location. Due to the limited information available for the

potential sites, and the timeline available, further assessments will be required to estimate the carrying capacity for those areas. Secondly, a system will need to be created for the periodic monitoring of natural and cultural resources, infrastructure and visitor satisfaction. This will ensure a level of control over current and potential impacts such as soil erosion, habitat loss, community disruption, and visitor



dissatisfaction. Additionally, to ensure the natural integrity of the ecosystem is maintained, some amount of forest rehabilitation will need to take place in areas stated in the Forest Conservation Plan, along with strict monitoring of sites prone to river poisoning. Since waste disposal was seen as an area of concern for most residents, central sites will need to be built in each community to facilitate waste disposal while awaiting pick up from the municipal garbage disposal companies.

Goal 2

To foster cohesiveness and collaboration among NGOs, CBOs (particularly the Maroon Council) and individuals involved in the management of tourism activities within the Rio Grande Valley, through the formation of tourism committees.



Stakeholders involved guiding current ecotourism activities have expressed a lack of transparency and cohesiveness between community groups. Surveys also revealed that there are visitors who are unaware of tourism activities being carried out in the communities. This will ultimately result in conflicts; as resources used are shared across boundaries and communities. Additionally, some tours will require traverse through residents' properties. A committee will need to be formed with a member from each group inclusive of the Maroon Council, which should

be responsible for ensuring of all tourism operators is created and maintained. Community members should also be made fully aware of tourism activities and those activities involving use of private property must be formally approved by residents. Additionally, meetings should be facilitated to discuss how resources are being used and managed. This committee should also be responsible for planning and executing yearly collaborative events geared promoting tourism activities offered by the different communities and creating awareness among visitors of the valuable resources present.

Goal 3

To provide enjoyable and satisfactory recreational experiences for visitors, through the provision of adequate infrastructure and trained personnel.



In an effort to create a symbiotic relationship between visitor satisfaction and economic returns infrastructure, safety features and knowledgeable tour guides must be present in each community/location. Consequently, tour guides and first aid attendants will need to be trained in each location in an effort to ensure consistent and accurate information is being disseminated to visitors. Additionally, safety features along trails and high-risk locations such as rivers must be

constructed and/or renovated to ensure safety of visitors. Registered lodging facilities and emergency response systems will need to be implemented in central areas. Another area of improvement is the requirement for directional, safety and educational signage throughout the locations.

Goal 4

To ensure economic sustainability of the tourism product in communities through knowledge sharing and marketing.



To maintain the sustainability of the tourism product throughout communities the three pillars of sustainable development will need to be realized- Social, economic and environment. Economic sustainability will come through the implementation of recommendations that will ensure natural and cultural resource preservation and visitor satisfaction. Once implemented, these recommendations will assure some level of economic returns. However, additional measures can be put in place to promote sustainability of ecotourism in communities. A tourism plan will

need to be created for each community, which should include the activities and amenities to be offered, costs and resources required to carry out activities. Additionally, cultural items such as craft, food, music and dance, can be included in the tourism product created for additional income. This will also ensure that community members not directly involved in the ecotourism activities benefit through offering these services. Schools within the community can also play a role through facilitating knowledge sharing activities surrounding ecotourism in the community. To ensure consistent visitation, marketing will need to be embedded in the tourism plans created by each community/tour operator. This can include the creation of brochures, social media platform, print media or radio advertisements.

Action Plan

Goals	Objectives	Indicators	Responsible Agencies	Timeline
To preserve the natural and cultural resources in the Rio Grande Valley by developing a system for the management of tourism activities.	<ul style="list-style-type: none">Determine tourism carrying capacity of each existing and potential ecotourism destination.Establish indicators and standards that will be monitored on a bi-annual basis for visitor management, to promote sustainable tourism practices.Carry out forest rehabilitation exercise for degraded areas identified in natural park boundaries and in buffer zone areas.Reducing the level of river poisoning through increased monitoring and enforcement.Improve waste management practices in each community.	<ul style="list-style-type: none">Tourism Carrying Capacity estimated for recreational areas in Moore town, Cuna Cuna Trail, Corn Puss Gap Trail, Cornwall Barracks, Hayfield, Millbank.Proposed indicators and standards of quality created and presented to community groups for guiding ecotourism activities.Carry out forest rehabilitation exercises in Long Mountain Hill and other key sites.Appointment of community members to monitor fishing activities that lead to river poisoningGarbage disposal skips installed in communities of Moore Town, Windsor, Millbank, and Cornwall Barracks.Signage created for each	JCDT, BPFA, Maroon Council, , NSWMA	TBD

Goals	Objectives	Indicators	Responsible Agencies	Timeline
		community advising visitors and residents to avoid littering.		
To foster cohesiveness and collaboration among NGOs, CBOs (particularly the Maroon Council) and individuals involved in the management of tourism activities within the Rio Grande Valley, through the formation of tourism committees.	<ul style="list-style-type: none"> • Create an inventory of all tourism operators in the Rio Grande Valley. • Promotion of Transparency among groups by encouraging periodic meetings to discuss tourism activities and status of natural and cultural resources. • Encourage planning of joint yearly events to promote tourism activities 	<ul style="list-style-type: none"> • JCDT, Maroon Council, TPDCo maintains log of all tourism operators existing in the Rio Grande Valley • Tourism committee created. • One joint yearly event hosted which encourages visitors to spend 2 – 3 days in the area. 	JCDT, Maroon Council, TPDco	TBD
To provide enjoyable and satisfactory recreational experiences through the provision of adequate infrastructure and trained personnel.	<ul style="list-style-type: none"> • Development and maintenance of infrastructure such as; safety features along trails and rivers, lodging, educational signage, directional signage, safety signage. • Create guidelines and recommendations for development and use of infrastructure • Create a training programme for tour guides in each community 	<ul style="list-style-type: none"> • Renovation of steps at Nanny Falls • Renovation of Moore Town Visitors' Center • Safety features (rails, steps, retaining walls) installed along all trails. • Directional, educational and safety signage installed along Nanny Falls Trail, Moore Town, Cistern Spring Trail and Broadstone Beach. 	Maroon Council, JCDT, BPFA, TPDCo	TBD

Goals	Objectives	Indicators	Responsible Agencies	Timeline
		<ul style="list-style-type: none"> • Signage improved and installed on Cuna Cuna Pass and Corn Puss Gap trails • At least three tour guides trained in each community • At least two first aid attendants trained in each community. 		
To ensure economic sustainability of the tourism product in communities through knowledge sharing and marketing	<ul style="list-style-type: none"> • The inclusion of cultural products in tourism product. • Encourage the introduction of tourism in schools within the community • Encourage through capacity building, consistent marketing of tourism products through creation social media platforms , brochures, print and media advertisements. • Creation of tourism plan for each location 	<ul style="list-style-type: none"> • Craft items on display in Moore Town Visitors' Center and Ambassabeth Visitors' Center • Inclusion of schools in yearly events. • Tourism committee visit schools within the community bi-annually to offer workshops on local culture and ecotourism. • Workshops on marketing and social media networking • Brochures present at visitor centers. • Advertisement in print and media. • Tourism Plan created for each community 	Maroon Council, JCDT, TPDCo, SDC, MOE, BPFA	TBD

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Appendix A – Sustainable Tourism Site Assessment Forms

Name of Community: Cornwall Barracks, Portland					
Name of Attraction: Rat Bat Cave, Cistern Spring Falls and the Rio Grande			Group Responsible: None – interested individuals but there is a Farmers' Group		
Contact Person: Hylton Smith					
Contact Information: H. Smith 1876-4065757					
<p>Attraction Overview (Briefly give an overview of activities/visitor opportunities on this site):</p> <p>Cornwall Barracks is community with a population of about 1,000 located over the hill from Moore Town in the Upper Rio Grande Valley – across the river from Ginger House and Comfort Castle. It is of historic significance having been established initially as barracks for British soldiers to “keep an eye” on the Moore Town Maroon community after the signing of the 1739 Peace Treaty. Later on when the barracks were closed by the British Army, the site which has more flat land than Moore Town was inhabited by Maroons. There is an idea where the location of the original barracks may be, but there are no artefacts remaining there. The main attractions are:-</p> <ul style="list-style-type: none"> • “Rat Bat” Cave – a fairly large cave with a spring running out of it and into the Rio Grande. • Cistern Spring Waterfall – a large waterfall flowing into the Rio Grande – you can climb up above the last level to another waterfall. • Rio Grande – swimming <p>When the river is low – one can easily walk across to the communities of Comfort Castle and Ginger House. The remnants of a swinging bridge remain which allowed easier access across the Rio Grande however the condition of the bridge had deteriorated over the years and was recently washed away during heavy rains.</p> <p>There are several bed and breakfast opportunities in the area.</p>					
Type of Attraction (Check the ones that apply)	Cultural	Scenic	Historic	Biodiversity	Other (list)
	X - Maroon heritage	X – Rio Grande Valley	X – former site of British soldier barracks	X – insects, birds, plants	Cave, Waterfall, River

For each question below, assign a point value to the description that accurately describes the assessment subject in relation to the attraction.

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Ownership	Land not owned by community. No permission sought	Land not owned by community. Permission being sought	Lease on land or other agreement	Clear title held on the land	4 Community land
Environment					
Environmental Impacts	Activity has clear and lasting impacts on the environment	Activity has possible impacts, if not managed properly	Activity has very limited impacts - carrying capacity etc.	Activity does not impact the environment	3
Probability of Impact from Natural Disasters Type: Flooding & Landslides	Activity/area is quite likely to be impacted by natural disasters	Natural disasters somewhat likely to impact	Natural disasters have minimal effect on the activity/area	Natural disasters do not affect activity/area	3 – heavy rainfall – river may be in spate at this time; landslides may impact road from Moore Town
Recovery from Natural Disasters	Area takes a year or more to recover	Area takes 6 months to a year	Area takes 1 - 6 months to	Natural disasters do not affect the	2

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
	from natural disasters	to recover from natural disasters	recover from natural disasters	area	
Community					
Negative Community Impacts (Social)	Activity has significant negative social impacts	Activity has some negative social impacts on community	Activity has limited negative social impacts on community	Activity does not have negative social effects on community	4 When entering Rat Bat Cave – homage to be paid to the Ancestors
Negative Community Impacts (Infrastructure)	Activity has significant negative impacts on community infrastructure	Activity has some negative impacts on community infrastructure	Activity has limited negative impacts on community infrastructure	Activity does not have negative effects on community infrastructure	4
Community Participation	Community not consulted	Community not involved, but consulted	Community highly involved, do not lead	Community fully leading the project	4 JCDT facilitating
Access and Infrastructure					
Restrooms	None	Available, but not suitable for visitors	Visitor ready, but needs improvement	Clean, visitor ready bathrooms	1 Could get access nearby
Water	No drinking water available	Drinking water on site, but not accessible to visitors	Drinking water on site (not always reliable)	Clean drinking water available and accessible to visitors	4 Not at the River but in the community
Visitor lodging	No lodging available	Lodging available, not at reasonable standard	Lodging available, but needs some improvement	Reliable lodging available	4
Food	No food available on site	Only snacks available	Food available, standard needs improvement	Food available and visitor ready	3
Signage (directional)	No directional signage	One or two directional signs only	Some directional signage; needs improvement	Directional signage is well made, legible and sufficient	2
Time from (Kingston) Port Antonio	Over 3 hours	2 – 3 hours	Under 2 hours	About 1 hour	1 (4)
Access Roads	Site is not easily accessible to visitors	Site has limited accessibility to visitors	Site accessible, but roads need improvement	Site easily accessible to visitors	4
Communications (Telephone and Internet) for bookings	No phone or internet	Limited cell phone coverage (service not reliable)	Internet and telephone services (occasionally out of service)	Internet and telephone on landline - very reliable	4
Emergency Services	No Emergency services on site	Limited services (first aid kit)	First Aid response team certified	Certified team with Kit and Plan	1
Market Niche					
Market Size (in high peak seasons with normal conditions)	Less than 20 visitors per month	21 - 50 visitors per month	51 -100 visitors per month	More than 100 visitors per month	1
Potential Market	Attraction has no	Attraction has	Attraction has	Attraction has a	4

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
	potential to attract more visitors	limited potential to attract more visitors	average potential to attract more visitors	strong potential to attract more visitors	
Marketing Strategy	No marketing strategy	Limited marketing strategy	Marketing strategy exists - under budgeted	Marketing strategy clearly defined and budgeted	1
Marketing Activities List:	No marketing activities	Limited marketing activities (word of mouth)	Some marketing activities (brochures, advertisements, etc.)	Strong marketing activities (well developed tour packages)	2
Management Capacity					
Quality of Staff	No staff or staff not trained or experienced	Staff has limited experience and training. Needs improvement	Staff has experience and training. Additional training needed	Experienced and well trained staff	1 – business not yet established
Staffing	No staff	Limited staff	Adequate staff. Needs improvement	Excellent staffing in organisation	1 – business not yet established
Organisational Structure	No organisational structure	Out-dated or inadequate structure	Organisational structure in place needs modifications	Organisational structure is clear and working	Farmers ‘ Group and interested individuals
Business Plan	No business plan	Business plan available, but not implemented	Business plan needs improvement, with defined strategies	Strong business plan being implemented	1
Visitor Security					
Management Safety Concerns (for visitors)	Serious safety concerns (for visitors)	Some security concerns (for visitors)	Security concerns (for visitors) are addressed	No safety concerns (for visitors)	3 Limited concerns re: safety e.g. falling whilst climbing waterfall
Perceived Visitor Security	Serious perceived visitor security concerns	Some perceived visitor security concerns	Perceived security concerns for visitors are being addressed	No perceived security concerns for visitors	4
Links					
Packaging Potential with BJCMNP Sites	No potential for activity to be packaged with Park sites	Limited potential for activity to be packaged with Park sites	Adequate potential for activity to be packaged with Park sites	Strong potential for activity to be packaged with Park sites	4 (and nearby community sites)

Other Components

<p>Community Ideas</p> <p>What is special about your community - place/site, food, plant, animal: Maroon heritage Rat Bat Cave, Cistern Spring Falls and Rio Grande</p> <p>Describe a one-day tour (10:00am to 4:00pm) 7:30am Leave Kingston 10:00 am Arrive Cornwall Barracks – Welcome & Introductions 10:15am – Walk to Rat Bat Cave and Cistern Spring Falls and Rio Grande 11:15 am – Relax at Cistern Spring Falls (walk up to next level if adventurous) and Rio Grande 1:00pm Return to Cornwall Barracks for lunch in the community 2:00pm Depart for Moore Town 2:30pm Brief Stop in Moore Town – monuments, Visitors’ Centre presentation & music 4:00pm Depart for Kingston</p>
<p>List Current Partners</p> <p>JCDT</p>
<p>Training</p> <p>None</p>
<p>Assessors’ Comments:</p> <p>A plan is urgently needed to include:</p> <ul style="list-style-type: none"> • detailing of day tour – to include Moore Town • assessment of homes re: Bed & Breakfast <p>This community appears to have several bed & breakfast opportunities and could be paired with Moore Town for stay-over visits.</p>

Name of Community: Hayfield, St. Thomas					
Name of Attraction: Not yet named/operational; currently known for being the starting point of the Cuna Cuna Pass Trail (to Ambassabeth, Bowden Pen)			Group Responsible: Hayfield CDC & Farmers' Group		
Contact Person: Kimora Scott, President and Roosevelt Deans, PRO; Joel Matheson, US PCV					
Contact Information: K Scott: 501-4141; R Deans: 367-9691; J Matheson: 556-6069					
<p>Attraction Overview (Briefly give an overview of activities/visitor opportunities on this site):</p> <p>Hayfield is a community located in the Blue Mountains and looking over to the John Crow Mountains. It has Maroon heritage and is at one end of the Cuna Cuna Pass Trail. There are two great-house ruins – Ladiesfield and Grampion.</p> <p>Directions: To get to Hayfield from Kingston, drive to Port Morant via Harbour View (1.5 hours) and turn inland to Bath (1/2 hr). Just before getting into the town of Bath, there is a road on the left to Hayfield through Castle Hill.</p>					
Type of Attraction (Check the ones that apply)	Cultural	Scenic	Historic	Biodiversity	Other (list) _____
	X – plantation great houses & Maroon heritage	X – Blue Mountains & Plantain Garden Valley, John Crow Mountain	X - plantation great houses; former quarrying for limestone for terrazzo tile	X – birds, plants Agro-biodiversity	

For each question below, assign a point value to the description that accurately describes the assessment subject in relation to the attraction.

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Ownership	Land not owned by community. No permission sought	Land not owned by community. Permission being sought	Lease on land or other agreement	Clear title held on the land	Not clear – coordinate taken to be sent to relevant agencies
Environment					
Environmental Impacts	Activity has clear and lasting impacts on the environment	Activity has possible impacts, if not managed properly	Activity has very limited impacts - carrying capacity etc.	Activity does not impact the environment	3
Probability of Impact from Natural Disasters Type:	Activity/area is quite likely to be impacted by natural disasters	Natural disasters somewhat likely to impact	Natural disasters have minimal effect on the activity/area	Natural disasters do not affect activity/area	3 – heavy rainfall – mud
Recovery from Natural Disasters	Area takes a year or more to recover from natural disasters	Area takes 6 months to a year to recover from natural disasters	Area takes 1 - 6 months to recover from natural disasters	Natural disasters do not affect the area	2

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Community					
Negative Community Impacts (Social)	Activity has significant negative social impacts	Activity has some negative social impacts on community	Activity has limited negative social impacts on community	Activity does not have negative social effects on community	4
Negative Community Impacts (Infrastructure)	Activity has significant negative impacts on community infrastructure	Activity has some negative impacts on community infrastructure	Activity has limited negative impacts on community infrastructure	Activity does not have negative effects on community infrastructure	4 As long as Rest-Stop does not sell packaged snacks already available at shop and opportunities for B&B – local homes
Community Participation	Community not consulted	Community not involved, but consulted	Community highly involved, do not lead	Community fully leading the project	4 SDC, JCDT, JOAM - facilitating
Access and Infrastructure					
Restrooms	None	Available, but not suitable for visitors	Visitor ready, but needs improvement	Clean, visitor ready bathrooms	To be built
Water	No drinking water available	Drinking water on site, but not accessible to visitors	Drinking water on site (not always reliable)	Clean drinking water available and accessible to visitors	To be available at Rest Stop – bottled water to be sold
Visitor lodging	No lodging available	Lodging available, not at reasonable standard	Lodging available, but needs some improvement	Reliable lodging available	Will investigate community members
Food	No food available on site	Only snacks available	Food available, standard needs improvement	Food available and visitor ready	2 – from Shop in Square. Rest Stop to include Kitchen
Signage (directional)	No directional signage	One or two directional signs only	Some directional signage; needs improvement	Directional signage is well made, legible and sufficient	2
Time from Kingston	Over 3 hours	2 – 3 hours	Under 2 hours	About 1 hour	2 Mostly Kingston traffic
Access Roads	Site is not easily accessible to visitors	Site has limited accessibility to visitors	Site accessible, but roads need improvement	Site easily accessible to visitors	2
Communications (Telephone and Internet) for bookings	No phone or internet	Limited cell phone coverage (service not reliable)	Internet and telephone services (occasionally out of service)	Internet and telephone on landline - very reliable	3
Emergency Services	No Emergency services on site	Limited services (first aid kit)			?

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Market Niche					
Market Size (in high peak seasons with normal conditions)	Less than 20 visitors per month	21 - 50 visitors per month	51 -100 visitors per month	More than 100 visitors per month	Currently ?
Potential Market	Attraction has no potential to attract more visitors	Attraction has limited potential to attract more visitors	Attraction has average potential to attract more visitors	Attraction has a strong potential to attract more visitors	4
Marketing Strategy	No marketing strategy	Limited marketing strategy	Marketing strategy exists - under budgeted	Marketing strategy clearly defined and budgeted	1
Marketing Activities List:	No marketing activities	Limited marketing activities (word of mouth)	Some marketing activities (brochures, advertisements, etc.)	Strong marketing activities (well developed tour packages)	1
Management Capacity					
Quality of Staff	No staff or staff not trained or experienced	Staff has limited experience and training. Needs improvement	Staff has experience and training. Additional training needed	Experienced and well trained staff	1 – business not yet established
Staffing	No staff	Limited staff	Adequate staff. Needs improvement	Excellent staffing in organisation	1 – business not yet established
Organisational Structure	No organisational structure	Out-dated or inadequate structure	Organisational structure in place needs modifications	Organisational structure is clear and working	CDC and Agricultural Association
Business Plan	No business plan	Business plan available, but not implemented	Business plan needs improvement, with defined strategies	Strong business plan being implemented	1
Visitor Security					
Management Safety Concerns (for visitors)	Serious safety concerns (for visitors)	Some security concerns (for visitors)	Security concerns (for visitors) are addressed	No safety concerns (for visitors)	3 Limited concerns
Perceived Visitor Security	Serious perceived visitor security concerns	Some perceived visitor security concerns	Perceived security concerns for visitors are being addressed	No perceived security concerns for visitors	4
Links					
Packaging Potential with BJCMNP Sites	No potential for activity to be packaged with Park sites	Limited potential for activity to be packaged with Park sites	Adequate potential for activity to be packaged with Park sites	Strong potential for activity to be packaged with Park sites	4

Other Components

Community Ideas

What is special about your community - place/site, food, plant, animal:

Cunha Cunha Pass Trail and Maroon heritage

Great Houses – Ladiesfield and Grampion

Agricultural produce e.g. plantains, bananas, coconuts, fruit and vegetables

Popcaan – popular DJ born and grown in this community – sang in church at start of Cuna Cuna Pass Trail

Describe a one-day tour (10:00am to 4:00pm)

7:30am Leave Kingston

9:45am Arrive Hayfield – Welcome & Introductions

10:00am Start on trail to Ladiesfield (40 minutes to property on relatively flat road) or Grampion (1.5hr to property on very steep slopes) - depending on preference for hiking

On hikes and at properties – information on the flora and fauna e.g. John Chewit bird, different types of “wiss” and agriculture as well as history of the area

12:00 Group from Ladiesfield returns to Hayfield first for lunch at Rest-Stop

1:00 Group to Grampion returns to Hayfield for lunch

1:30pm Entertainment e.g. drumming, singing, DJ contest (Popcaan note)

2:30pm Relax and enjoy scenery – possible partial walk on Cunha Cunha Pass Trail

3:30pm Purchase produce

4:00pm Depart for Kingston

N.B.: The Grampion tour will be developed later due to challenges with the terrain.

List Current Partners

US Peace Corps

SDC

RADA

JCDT/BJCMNP

JOAM/Windsor CDC (GEF SGP funded Project) - \$1million for Hayfield Rest Stop – need drawings

Bowden Pen Farmers’ Association

Tourism Product Development Company (TPDCo)

Training

The only training conducted in last 3 years was:-

- Entrepreneurial Skills with SDC
- Bee-keeping with JOAM

Much more training will be needed in all areas related to hospitality and business management.

Assessors’ Comments:

A plan is urgently needed to include:

- drawings for the building (draughtsman) and costing of materials and labour
- ownership of land re: great-houses clarified (JNHT & NLA)
- detailing of day tour – will need another visit to include Gampion and cooking
- assessment of homes re: Bed & Breakfast
- Business & Marketing Plan
- Training

Name of Community: Millbank, Comfort Castle & Ginger House					
Name of Attraction: Upper Rio Grande Valley			Group Responsible: Bowden Pen Farmers' Association (BPFA) and members of Ginger House community		
Contact Person: Eric "Worries" McCurbin – President, BPFA and citizen of Ginger House					
Contact Information: Eric "Worries" McCurbin (1876) 404-5196					
<p>Attraction Overview (Briefly give an overview of activities/visitor opportunities on this site): After crossing the Alligator Church Bridge over the Rio Grande and turning left, the last three communities on the road are: Ginger House, Comfort Castle and Millbank. Beyond Millbank the road fades away to a drivable trail to Bowden Pen where the BPFA have their eco-resort "Ambassabeth". Many visitors go the Ambassabeth without stopping in the 3 communities even though one could stop in any 3 of the communities for a Rio Grande experience (and then return home to Port Antonio or Kingston or continue on to reach Ambassabeth for dinner.</p> <p>Ginger House: Broadstone Beach – opportunity for swimming and sun-bathing on the Broadstone Beach along the Rio Grande (also has a small spring/waterfall); short raft trip is possible. In addition, one can do a short hike (30 min return) to Annie River Big Stone – a site with a stream running between 3 large rocks (over 8 feet tall) and/or a Sinkhole.</p> <p>Comfort Castle: A community member is establishing an entertainment centre on the river bank across from a waterfall and in the town square. There will be a bar, restaurant and restroom facilities next to a large "lawn" and river access.</p> <p>Millbank: There is a community centre with a large playing field. The community centre has been refurbished and the community is in the process of establishing a small dried fruits processing plant. The idea is that one could stop at this point for fruit, trail mix and/or craft.</p>					
Type of Attraction (Check the ones that apply)	Cultural	Scenic	Historic	Biodiversity	Other (list) Hydro-geology
	X – Maroon Heritage	X – Blue Mountains , Rio Grande River		X – birds, plants Agro-biodiversity	Rock formations

For each question below, assign a point value to the description that accurately describes the assessment subject in relation to the attraction.

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Ownership	Land not owned by community. No permission sought	Land not owned by community. Permission being sought	Lease on land or other agreement	Clear title held on the land	3, 4 Ginger House and Comfort Castle – river access through community member's land – who has given permission. Millbank – Community Centre
Environment					
Environmental Impacts	Activity has clear and lasting impacts on the environment	Activity has possible impacts, if not managed properly	Activity has very limited impacts - carrying capacity etc.	Activity does not impact the environment	3 Garbage may be a problem as almost no local collection
Probability of Impact from Natural Disasters Type: Heavy rainfall	Activity/area is quite likely to be impacted by natural disasters	Natural disasters somewhat likely to impact	Natural disasters have minimal effect on the activity/area	Natural disasters do not affect activity/area	3 – land-slides

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Recovery from Natural Disasters	Area takes a year or more to recover from natural disasters	Area takes 6 months to a year to recover from natural disasters	Area takes 1 - 6 months to recover from natural disasters	Natural disasters do not affect the area	3
Community					
Negative Community Impacts (Social)	Activity has significant negative social impacts	Activity has some negative social impacts on community	Activity has limited negative social impacts on community	Activity does not have negative social effects on community	4
Negative Community Impacts (Infrastructure)	Activity has significant negative impacts on community infrastructure	Activity has some negative impacts on community infrastructure	Activity has limited negative impacts on community infrastructure	Activity does not have negative effects on community infrastructure	4
Community Participation	Community not consulted	Community not involved, but consulted	Community highly involved, do not lead	Community fully leading the project	4 JCDT & BPFA facilitating
Access and Infrastructure					
Restrooms	None	Available, but not suitable for visitors	Visitor ready, but needs improvement	Clean, visitor ready bathrooms	3 - Currently have to use a community member's home
Water	No drinking water available	Drinking water on site, but not accessible to visitors	Drinking water on site (not always reliable)	Clean drinking water available and accessible to visitors	2 – in homes Community drinks spring water but suggest not for visitors
Visitor lodging	No lodging available	Lodging available, not at reasonable standard	Lodging available, but needs some improvement	Reliable lodging available	2 -Community member in Ginger House building a guest-house. Ambassabeth
Food	No food available on site	Only snacks available	Food available, standard needs improvement	Food available and visitor ready	2- Restaurant at Millbank, Meals can be prepared at Ginger House
Signage (directional)	No directional signage	One or two directional signs only	Some directional signage; needs improvement	Directional signage is well made, legible and sufficient	2- Signs are only for Ambassabeth and one sign re: Millbank
Time from Kingston and (Port Antonio)	Over 3 hours	2 – 3 hours	Under 2 hours	About 1 hour	1 2.8 hrs to Ginger House (3)
Access Roads	Site is not easily accessible to visitors	Site has limited accessibility to visitors	Site accessible, but roads need improvement	Site easily accessible to visitors	3

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Communications (Telephone and Internet) for bookings	No phone or internet	Limited cell phone coverage (service not reliable)	Internet and telephone services (occasionally out of service)	Internet and telephone on landline - very reliable	3
Emergency Services	No Emergency services on site	Limited services (first aid kit)	Trained and certified personnel	Trained and certified personnel & plan	1, no first aid kits present
Market Niche					
Market Size (in high peak seasons with normal conditions)	Less than 20 visitors per month	21 - 50 visitors per month	51 -100 visitors per month	More than 100 visitors per month	1
Potential Market	Attraction has no potential to attract more visitors	Attraction has limited potential to attract more visitors	Attraction has average potential to attract more visitors	Attraction has a strong potential to attract more visitors	4
Marketing Strategy	No marketing strategy	Limited marketing strategy	Marketing strategy exists - under budgeted	Marketing strategy clearly defined and budgeted	1
Marketing Activities List:	No marketing activities	Limited marketing activities (word of mouth)	Some marketing activities (brochures, advertisements, etc.)	Strong marketing activities (well developed tour packages)	1
Management Capacity					
Quality of Staff	No staff or staff not trained or experienced	Staff has limited experience and training. Needs improvement	Staff has experience and training. More training needed	Experienced and well trained staff	1 – No staff except Ambass- abeth – they have training
Staffing	No staff	Limited staff	Adequate staff. Needs improvement	Excellent staffing in organisation	1 – as above
Organisational Structure	No organisational structure	Out-dated or inadequate structure	Organisational structure in place needs modifications	Organisational structure is clear and working	1 for GH, CC & MB and 4 for BPFA(Ambass- abeth)
Business Plan	No business plan	Business plan available, but not implemented	Business plan needs improve- ment, with defined strategies	Strong business plan being implemented	1
Visitor Security					
Management Safety Concerns (for visitors)	Serious safety concerns (for visitors)	Some security concerns (for visitors)	Security concerns (for visitors) are addressed	No safety concerns (for visitors)	3
Perceived Visitor Security	Serious perceived visitor security concerns	Some perceived visitor security concerns	Perceived security concerns for visitors are being addressed	No perceived security concerns for visitors	4
Links					
Packaging Potential with BJCMNP Sites	No potential for activity to be packaged with Park sites	Limited potential for activity to be packaged with Park sites	Adequate potential for activity to be packaged with Park sites	Strong potential for activity to be packaged with Park sites	4

Other

Community Ideas

What is special about your community - place/site, food, plant, animal:

Rio Grande – the River with waterfalls and numerous tributaries e.g. Annie River

Agricultural produce e.g. plantains, bananas, ginger – used a lot in drinks

Bamboo Craft

Need for: Signage e.g. at Alligator Church Bridge; fix road

Visitors would begin their tour along the main road before Windsor at Look Out Point where they have a picturesque view of the Rio Grande merging with the Back Rio Grande and can view Pumpkin and Watch Hills important in the history of the First Maroon War along with the Blue Mountains in the background. Through Windsor and Sea-man's Valley past the entrance to Moore Town and Cornwall Barracks across the Alligator Church Bridge and then to Ginger House, Comfort Castle and/or Millbank and Ambassabeth.

Describe a one-day tour:-

Option 1: Ginger House

7:30am Leave Kingston

9:45am Arrive at Look-Out – Brief stop for Photo-Opportunity

10:30am Ginger House – Welcome & Introductions (Rest Room stop)

10:45 Walk to Sink Hole and Annie River Big Rocks

11:45 am Walk down to Broadstone Beach and spend

1:00pm Lunch

2:00pm Relax at Broadstone Beach – swim/raft

3:30pm Head back to Kingston with short stop at Moore Town to view monuments

6:30pm Arrive back in Kingston

Option 2: Comfort Castle

7:30am Leave Kingston

9:45am Photo-Opportunity (disembark vehicle to stretch): Look-Out

10:15am Photo-Opportunity (disembark vehicle to stretch): Alligator Church Bridge

11:00am Comfort Castle – Welcome & Introductions and spend day at Rio Grande

12:30 pm Lunch

1:30pm Continue to relax along the Rio Grande

2:00pm Relax at Comfort Castle Lawn – swim/raft

3:30pm Head back to Kingston with short stop at Moore Town to view monuments

6:30pm Arrive back in Kingston

Option 3: Millbank

7:30am Leave Kingston

9:45am Photo-Opportunity (disembark vehicle to stretch): Look-Out

10:15am Photo-Opportunity (disembark vehicle to stretch): Alligator Church Bridge

11:30am Millbank – Welcome & Introductions at Community Centre

Hike to White River Falls or relax at Community Centre by the Rio Grande

1:30 pm Lunch

Continue to relax along the Rio Grande

3:00pm Head back to Kingston with short stop at Moore Town to view monuments

6:30pm Arrive back in Kingston

Option 4: Ambassabeth – One Day

One day visit not likely to be popular unless for festival - can be done but will only allow for 2.5hours at Ambassabeth – lunch and river dip. Better option for a one-day to Ambassabeth is the Cunha Cunha Pass Trail and then return to Kingston

7:30am Leave Kingston

<p>9:45am Arrive Hayfield – Welcome & Introductions 10:00am Hike the Cunha Cunha Pass Trail 12:30 pm Arrive at Ambassabeth & have Lunch 1:30pm Relax at Rio Grande and on the property 3:00pm Head back to Kingston with short stop at Moore Town to view monuments 7:30pm Arrive back in Kingston</p> <p>Option 5: Ambassabeth – Two Days Two Day Trip – Ginger House or Comfort Castle and Ambassabeth Day 1: Option 1 or 2 but proceed to Ambassabeth at 3:30pm 4:30pm – Check-In, Shower etc 6:00pm – Dinner Day 2: Cunha Cunha Pass Trail (part-way) and dip in Rio Grande at Ambassabeth 2:30pm Head back to Kingston after Lunch</p>
<p>List Current Partners JCDT/BJCMNP BPFA JOAM TPDCo.</p>
<p>Training The only training conducted in last 3 years has been RADA – Farmer Field School (climate friendly agriculture) and Home Economics. Some members were certified by TPDCo. for TEAM JAMAICA and Tour Guiding (through JCDT) but that was almost 10 years ago.</p> <p>Training required in all areas related to hospitality and business management.</p>
<p>Assessors’ Comments:</p> <p>A plan is urgently needed to include:</p> <ul style="list-style-type: none"> • Detailing of day tours • Business & Marketing Plans to developed and implemented • Training

Name of Community: Windsor, Portland	
Name of Attraction:	Group Responsible: Windsor CDC
Contact Person: Cohen Ming , Sherod Lee, Donaldson Bernard	
Contact Information:	

Attraction Overview (Briefly give an overview of activities/visitor opportunities on this site): Windsor is a community located in the Rio Grande Valley and will offer visitors scenic views of the Blue Mountains and Rio Grande flood plain along with hikes and visits to numerous springs and waterfalls in the area. There exists the option of including an Agro- tour to the Rio Grand Health Farms with options for lodging. Numerous potential attractions exists such as trails, waterfalls and potential for agro- tourism To get to Windsor from Kingston : Drive to Port Antonio and turn onto Smatt Road, take the right at first stop sign and then next left on Red Hassle Road to Fellowship/Berridale. Turn left at Fellowship. Then continue for about 5km.					
Type of Attraction (Check the ones that apply)	Cultural	Scenic	Historic	Biodiversity	Other (list)
	X – Maroon Heritage, music, drumming	X – Blue Mountains , Rio Grande River flood plains	X- Watchill	X – birds, plants Agro-biodiversity	

For each question below, assign a point value to the description that accurately describes the assessment subject in relation to the attraction.

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Ownership	Land not owned by community. No permission sought	Land not owned by community. Permission being sought	Lease on land or other agreement	Clear title held on the land	3, 4
Environment					
Environmental Impacts	Activity has clear and lasting impacts on the environment	Activity has possible impacts, if not managed properly	Activity has very limited impacts - carrying capacity etc.	Activity does not impact the environment	3
Probability of Impact from Natural Disasters Type:	Activity/area is quite likely to be impacted by natural disasters	Natural disasters somewhat likely to impact	Natural disasters have minimal effect on the activity/area	Natural disasters do not affect activity/area	3 – heavy rainfall – mud
Recovery from Natural Disasters	Area takes a year or more to recover from natural disasters	Area takes 6 months to a year to recover from natural disasters	Area takes 1 - 6 months to recover from natural disasters	Natural disasters do not affect the area	3
Community					
Negative Community Impacts (Social)	Activity has significant negative social impacts	Activity has some negative social impacts on community	Activity has limited negative social impacts on community	Activity does not have negative social effects on community	4
Negative Community Impacts (Infrastructure)	Activity has significant negative impacts on community infrastructure	Activity has some negative impacts on community infrastructure	Activity has limited negative impacts on community infrastructure	Activity does not have negative effects on community infrastructure	3
Community Participation	Community not consulted	Community not involved, but	Community highly involved,	Community fully leading the	4 CDC, SDC,

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
		consulted	do not lead	project	JCDT, JOAM – facilitating, ODPEM, RADA
Access and Infrastructure					
Restrooms	None	Available, but not suitable for visitors	Visitor ready, but needs improvement	Clean, visitor ready bathrooms	Yes- at CDC office to be renovated and available at Rio Gran Health Farms
Water	No drinking water available	Drinking water on site, but not accessible to visitors	Drinking water on site (not always reliable)	Clean drinking water available and accessible to visitors	Will be available at CDC office
Visitor lodging	No lodging available	Lodging available, not at reasonable standard	Lodging available, but needs some improvement	Reliable lodging available	In the process of getting residents names who are willing to create bed and breakfast. Current facilities at Rio Gran Health Farms
Food	No food available on site	Only snacks available	Food available, standard needs improvement	Food available and visitor ready	2- Restaurants, food shops and stalls in area. Plans to make cultural food available
Signage (directional)	No directional signage	One or two directional signs only	Some directional signage; needs improvement	Directional signage is well made, legible and sufficient	2- Plans in place to get additional signage
Time from Kingston (Port Antonio)	Over 3 hours	2 – 3 hours	Under 2 hours	About 1 hour	2 (1/2 hour)
Access Roads	Site is not easily accessible to visitors	Site has limited accessibility to visitors	Site accessible, but roads need improvement	Site easily accessible to visitors	3
Communications (Telephone and Internet) for bookings	No phone or internet	Limited cell phone coverage (service not reliable)	Internet and telephone services (occasionally out of service)	Internet and telephone on landline - very reliable	3
Emergency Services	No Emergency services on site	Limited services (first aid kit)			1, no first aid kits present
Market Niche					
Market Size (in high peak seasons with normal conditions)	Less than 20 visitors per month	21 - 50 visitors per month	51 -100 visitors per month	More than 100 visitors per month	1

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Potential Market	Attraction has no potential to attract more visitors	Attraction has limited potential to attract more visitors	Attraction has average potential to attract more visitors	Attraction has a strong potential to attract more visitors	4
Marketing Strategy	No marketing strategy	Limited marketing strategy	Marketing strategy exists - under budgeted	Marketing strategy clearly defined and budgeted	2- one created but professional recommendations needed to improve (Portland Tourism Action Alliance members)
Marketing Activities List:	No marketing activities	Limited marketing activities (word of mouth)	Some marketing activities (brochures, advertisements, etc.)	Strong marketing activities (well developed tour packages)	1, Marketing plan included social media and brochures. but not yet implemented
Management Capacity					
Quality of Staff	No staff or staff not trained or experienced	Staff has limited experience and training. Needs improvement	Staff has experience and training. Additional training needed	Experienced and well trained staff	3— some community members currently conduct tours and have training =, however not all. Additional training needed
Staffing	No staff	Limited staff	Adequate staff. Needs improvement	Excellent staffing in organisation	3
Organisational Structure	No organisational structure	Out-dated or inadequate structure	Organisational structure in place needs modifications	Organisational structure is clear and working	CDC
Business Plan	No business plan	Business plan available, but not implemented	Business plan needs improvement, with defined strategies	Strong business plan being implemented	2
Visitor Security					
Management Safety Concerns (for visitors)	Serious safety concerns (for visitors)	Some security concerns (for visitors)	Security concerns (for visitors) are addressed	No safety concerns (for visitors)	3
Perceived Visitor Security	Serious perceived visitor security concerns	Some perceived visitor security concerns	Perceived security concerns for visitors are being addressed	No perceived security concerns for visitors	4
Links					

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Packaging Potential with BJCMNP Sites	No potential for activity to be packaged with Park sites	Limited potential for activity to be packaged with Park sites	Adequate potential for activity to be packaged with Park sites	Strong potential for activity to be packaged with Park sites	4

Other

Community Ideas

What is special about your community - place/site, food, plant, animal:

Gateway for Upper Rio Grande Valley (Moore Town, Nanny Falls, Bump Grave, Ambassabeth, Cunha Cunha Pass Trail)
Agricultural produce e.g. plantains, bananas, coconuts, fruit and vegetables
Has numerous falls and springs, cool climate and vegetation and unique weather pattern

Visitors would begin at Look out Point on the main road, where they can view Nanny's Watch Hill, and have a picturesque view of the Rio Grande merging with the Back Rio Grande and view of the Blue Mountains. From here to the Windsor CDC office to be registered and from there would be a community tour. This would take the trail from the CDC office to New Johns Hall (view of the Rio Grande from a different angle) and to the old banana boxing plant and then along the back street to view Meyma Spring. From the spring to Chocolate Walk to Dons River then to Constant Spring waterfalls. From there to Rio Gran Health Farms or the Community Centre.

Describe a one-day tour

7:30am Leave Kingston
9:45am Arrive at Look-out Point – Welcome & Introductions
10:00am Head to CDC Office to be registered and maybe get refreshments, then head on short trail to New Johns Hall with Tour Guide (Old Banana Boxing Plant, entrance to nanny town etc)
12:00 Head health farms for tour and lunch
1:00 pm Hike to back Street to relax at Meyma Spring
2:00 Tour to Chocolate walk to Dons River and then Constant Spring (waterfalls)
3:30pm Entertainment e.g. drumming, singing (CDC office)
4:00pm Return to Kingston or head further into the Rio Grande Valley

List Current Partners

SDC
RADA
JCDT
JOAM

Training

The only training conducted in last 3 years was Tour Guiding
Training required in all areas related to hospitality and business management.

Assessors' Comments:

A plan is urgently needed to include:

- Renovation of community center to be completed
- detailing of day tour
- assessment of homes re: Bed & Breakfast
- Business & Marketing Plan to be finalized by professional and implemented
- Training

Name of Community: Moore Town, Portland	
Name of Attraction: Nanny Falls, Nanny Bump Grave, Visitor Center	Group Responsible: Moore Town Maroon Council
Contact Person: Colonel Wallace Sterling	

Contact Information: W. Sterling: 1876-4065757					
Attraction Overview (Briefly give an overview of activities/visitor opportunities on this site): Moore Town is a small community of about 261, located along the Wild Cane (Negro) River. It is considered the capital of the Windward Maroons as it was the community established by Nanny after the Peace Treaty was signed in 1739. The national monument to national heroine: Nanny of the Maroons is located here as well as one of the national plaques commemorating the World Heritage Site inscription are located here. The Maroon Council have a small Visitors' Centre/Office near to the monuments and across from the Primary and All Age School. The main attractions are:- <ul style="list-style-type: none"> • The monuments and Visitors' Centre with its artefacts and information • Nanny Falls Trail – a pleasant walk through secondary forest to a waterfall flowing into the Wild Cane River. <p>A new trail has been identified with good potential – the Long Mountain Hill which has almost 360° views of the Rio Grande Valley and is a relatively easy walk. In addition, the Coney Trail is being established - it crosses a stream and has spectacular views of the mountains and Rio Grande Valley. Whilst it is steep and challenging it may offer opportunities for overnight camping to possibly catch a glimpse of the elusive Jamaican Hutia or Coney.</p> <p>There are a few bed and breakfast opportunities in the area.</p>					
Type of Attraction (Check the ones that apply)	Cultural	Scenic	Historic	Biodiversity	Other (list)
	X - Maroon heritage	X – Wild Cane River and John Crow Mountains – views to the Blue Mountains and Rio Grande Valley	X – new (since 1740) capital of the Windward Maroons	X – birds, plants, Giant Swallowtail Butterfly	

For each question below, assign a point value to the description that accurately describes the assessment subject in relation to the attraction.

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Ownership	Land not owned by community. No permission sought	Land not owned by community. Permission being sought	Lease on land or other agreement	Clear title held on the land	4 Community land
Environment					
Environmental Impacts	Activity has clear and lasting impacts on the environment	Activity has possible impacts, if not managed properly	Activity has very limited impacts - carrying capacity etc.	Activity does not impact the environment	3
Probability of Impact from Natural Disasters	Activity/area is quite likely to be impacted by natural disasters	Natural disasters somewhat likely to impact	Natural disasters have minimal effect on the activity/area	Natural disasters do not affect activity/area	3 – heavy rainfall – river may be in spate preventing access to the Falls
Type:					
Recovery from Natural Disasters	Area takes a year or more to recover from natural disasters	Area takes 6 months to a year to recover from natural disasters	Area takes 1 - 6 months to recover from natural disasters	Natural disasters do not affect the area	2
Community					
Negative Community Impacts (Social)	Activity has significant negative social impacts	Activity has some negative social impacts on community	Activity has limited negative social impacts community	Activity does not have negative social effects on community	4 There is a need for organisation and ensuring local community benefits

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
Negative Community Impacts (Infrastructure)	Activity has significant negative impacts on community infrastructure	Activity has some negative impacts on community infrastructure	Activity has limited negative impacts on community infrastructure	Activity does not have negative effects on community infrastructure	4
Community Participation	Community not consulted	Community not involved, but consulted	Community highly involved, do not lead	Community fully leading the project	4 There are at least 3 different groups actively offering tours.
Access and Infrastructure					
Restrooms	None	Available, but not suitable for visitors	Visitor ready, but needs improvement	Clean, visitor ready bathrooms	2 At Visitors' Centre but in need of repairs; needed closer to Trails
Water	No drinking water available	Drinking water on site, but not accessible to visitors	Drinking water on site (not always reliable)	Clean drinking water available and accessible to visitors	4
Visitor lodging	No lodging available	Lodging available, not at reasonable standard	Lodging available, but needs some improvement	Reliable lodging available	4 Limited numbers
Food	No food available on site	Only snacks available	Food available, standard needs improvement	Food available and visitor ready	3 Must be organised in advance
Signage (directional)	No directional signage	One or two directional signs only	Some directional signage; needs improvement	Directional signage is well made, legible and sufficient	2
Time from Kingston (Port Antonio)	Over 3 hours	2 – 3 hours	Under 2 hours	About 1 hour	2 (4)
Access Roads	Site is not easily accessible to visitors	Site has limited accessibility to visitors	Site accessible, but roads need improvement	Site easily accessible to visitors	4
Communications (Telephone and Internet) for bookings	No phone or internet	Limited cell phone coverage (service not reliable)	Internet and telephone services (occasionally out of service)	Internet and telephone on landline - very reliable	3
Emergency Services	No Emergency services on site	Limited services (first aid kit)	First Aid response team certified	Certified team with Kit and Plan	1
Market Niche					
Market Size (in high peak seasons with normal conditions)	Less than 20 visitors per month	21 - 50 visitors per month	51 -100 visitors per month	More than 100 visitors per month	1
Potential Market	Attraction has no potential to attract more visitors	Attraction has limited potential to attract more visitors	Attraction has average potential to attract more visitors	Attraction has a strong potential to attract more visitors	4
Marketing Strategy	No marketing strategy	Limited marketing strategy	Marketing strategy exists - under budgeted	Marketing strategy clearly defined and budgeted	1
Marketing Activities List:	No marketing activities	Limited marketing activities (word of mouth)	Some marketing activities (brochures,	Strong marketing activities (well developed tour	1

Assessment subject	Point Values				Points Given (and notes)
	1	2	3	4	
			advertisements, etc.)	packages)	
Management Capacity					
Quality of Staff	No staff or staff not trained or experienced	Staff has limited experience and training. Needs improvement	Staff has experience and training. Additional training needed	Experienced and well trained staff	1 – business not yet established by the Maroon Council but at least 2 others have a business
Staffing	No staff	Limited staff	Adequate staff. Needs improvement	Excellent staffing in organisation	1 – business not yet established
Organisational Structure	No organisational structure	Out-dated or inadequate structure	Organisational structure in place needs modifications	Organisational structure is clear and working	2 - Maroon Council and others – inadequate cooperation
Business Plan	No business plan	Business plan available, but not implemented	Business plan needs improvement, with defined strategies	Strong business plan being implemented	1
Visitor Security					
Management Safety Concerns (for visitors)	Serious safety concerns (for visitors)	Some security concerns (for visitors)	Security concerns (for visitors) are addressed	No safety concerns (for visitors)	3 Limited concerns
Perceived Visitor Security	Serious perceived visitor security concerns	Some perceived visitor security concerns	Perceived security concerns for visitors are being addressed	No perceived security concerns for visitors	4
Links					
Packaging Potential with BJCMNP Sites	No potential for activity to be packaged with Park sites	Limited potential for activity to be packaged with Park sites	Adequate potential for activity to be packaged with Park sites	Strong potential for activity to be packaged with Park sites	4 (and nearby community sites)

Other

<p>Community Ideas</p> <p>What is special about your community - place/site, food, plant, animal:</p> <p>Giant Swallowtail Butterfly Maroon heritage and monuments Nanny Falls, springs and streams, Wild Cane River John Crow Mountains (accessed on Coney Trail)</p> <p>Describe a one-day tour (10:00am to 4:00pm)</p> <p>7:30am Leave Kingston 10:00 am Arrive Moore Town (Visitors' Centre) – Welcome & Introductions 10:15am – Walk to Nanny Falls 11:00 am – Relax at Nanny Falls 12:15pm – Return to Moore Town 1:00pm Lunch in Moore Town 2:00pm Drumming and Dancing 3:00 pm Depart for Kingston or next Community</p> <p>Option 2 – Replace Nanny Falls with Long Mountain Hill (will result in a later lunch)</p> <p>Two Days – Coney Trail Experience 9:30am Leave Kingston 12:00 am Arrive Moore Town (Visitors' Centre) – Welcome & Introductions 12:15am – Visitors' Centre & Monuments 1:00 pm – Lunch 2:00pm – Nanny Falls Trail 4:00pm – Start on Coney Trail 5:00pm Help get Hunters' Camp ready 6:30 pm Dinner, Stories, Songs 8:30pm Watch for Conies Overnight in Shelter and Tents Am – Breakfast Nanny Falls 11:00am Return to Kingston</p>
<p>List Current Partners</p> <p>JCDT</p>
<p>Training</p> <p>None</p>
<p>Assessors' Comments:</p> <p>A plan is urgently needed to include:</p> <ul style="list-style-type: none"> • detailing of day tour – especially Coney Trail Tour • assessment of homes re: Bed & Breakfast <p>Can be linked to other community tours in area</p>

Appendix B- Tourism Carrying Capacity Estimations

To calculate carrying capacity the following parameters need to be measured:

- Physical Carrying Capacity (PCC)
- Real Carrying Capacity (RCC); and
- Effective or Permissible Carrying Capacity (ECC).

The PCC is always greater than the RCC, and the RCC is greater than the ECC, as each level is a corrected capacity level of the previous.

Physical Carrying Capacity (PCC) is defined as the maximum number of users that can physically fit into a recreational area.

Formula: $PCC = A \times U/a \times Rf$

Where: A = available area for public use determined by the conditions of the recreational area and by the limitations imposed due to the fragility of the surrounding area.

U/a = area required per user in recreational area to undertake activities

Rf = rotation factor (number of permissible visits/day) determined by:

$Rf = \text{Open period} / [\text{Average time of utilization/visit}]$

Real Carrying Capacity (RCC) is the maximum permissible number of visitors to a recreational area, once the corrective factors (Cf) derived from the particular characteristics of the site have been applied to the PCC.

Formula: $RCC = PCC - Cf1 - Cf2 - \dots - Cfn$

Where: Cf = a corrective factor expressed as a percentage

$RCC = PCC \times (100 - Cf1)\% \times (100 - Cf2)\% \times \dots \times (100 - Cfn)\%$

Assumptions: To measure the RCC, the following assumptions must be clarified:

Cf - the corrective factors are obtained by considering the biophysical, environmental, ecological, social and management variables;

Corrective factors are not always the same for each site as they are closely linked to the specific conditions and characteristics of each site or activity. This means that carrying capacity must be measured per site assessed.

Corrective factors are expressed in percentage terms using the following formula:

$$Cf = [M1 / Mt] \times 100$$

Where: Cf = corrective factor

M1 = limiting magnitude of variable

Mt = total magnitude of variable

Effective or Permissible Carrying Capacity (ECC) is the maximum number of visitors that a site can sustain, given the management capacity (MC) available.

Formula: $ECC = [Infrastructure\ Capacity \times MC] / RCC$

Where: ECC = effective carrying capacity

MC = management capacity based on staff and budget

RCC = real carrying capacity

Assumptions: To determine the ECC, the following assumptions must be clarified:

- MC – defined as the sum of conditions that the park management requires if it is to carry out its functions and objectives;
- Measuring MC is not easy, involving many variables, including inter alia policy measures, legislation, infrastructure, facilities, amenities and equipment, staff (both number and competency), funding, available budget, motivation and commitment;

- Limitations in management capacity constitute one of the significant issues in recreational area management;
- As the capacity to manage recreational area increases, the ECC will increase, yet never be greater than the RCC, even in the most favorable conditions;

MC is determined by using the following formula:

$MC = \text{Current staff and budget capacity} / \text{required staff and budget}$

The following limitations must be noted:

1. Due to the lack of contact information logged for visitors in each location, sample size for visitor concerns and satisfaction did not reflect a true sample. Consequently, a recalculation will need to be done once there is sufficient contact information for visitors
2. The values calculated for the Moore Town/Nanny Falls community reflect work that is to be done. A reassessment will also need to be done in this location as a follow up to arrive at an estimation that gives a higher level of confidence in the values calculated.

It is important to also note that the values calculated are based on multiple variables and are intended to be used as a guide, with focus placed on the monitoring of specific management indicators and standards of quality.

Tourism Carrying Capacity Nanny Falls (Swimming area, proposed recreational area)

(a) Physical Carrying Capacity = Area available for public use x U/a x Rf

$$PCC = 7500 \times 1/15 \times 1.33$$

$$PCC = 665 \text{ visitors/day}$$

(b) Real Carrying Capacity=

$$PCC \left(\frac{100 - Cf_1}{100} \times \frac{100 - Cf_2}{100} \times \frac{100 - Cf_3}{100} \times \frac{100 - Cf_4}{100} \times \frac{100 - Cf_5}{100} \times \frac{100 - Cf_6}{100} \right)$$

Cf_1 = Closure due to weather conditions

$$= \frac{90 \text{ days}}{365 \text{ days}} \times 100$$

Cf_2 = Crowding

$$= \frac{2 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf_3 = Waste Disposal

$$= \frac{15 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf_4 = Excessive Precipitation

$$= \frac{3 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Real Carrying Capacity =

$$PCC \left(\frac{100 - 24.657}{100} \times \frac{100 - 11.11}{100} \times \frac{100 - 83.333}{100} \times \frac{100 - 16.6}{100} \right)$$

$$RCC = 665 (0.75 \times 0.89 \times 0.16 \times 0.83)$$

$$= 665 \times 0.089$$

$$RCC = 58.9 \text{ or } 59 \text{ visitors/ day}$$

(c) Effective Carrying Capacity

$$\text{ECC} = [\text{Infrastructure Capacity} \times \text{MC}] / \text{RCC}$$

(Infrastructure – 8hrs/90minutes to location + (1 Gazebos+ 4 bathroom stalls+ 1 kitchen area + 2 trails) * MC= 8 employees

$$\text{ECC} = (8 * 1/ 59) * 100$$

$$\text{ECC} = 13.55\% \text{ of RCC}$$

$$\text{ECC} = 51.01 \text{ or } 51 \text{ Visitors /Day}$$

Tourism Carrying Capacity Nanny Falls Trail

(a) **Physical Carrying Capacity = Area available for public use x U/a x Rf**

$$\text{PCC} = 1048.38 * 1/15 * 1.6$$

$$\text{PCC} = 111.83 \text{ or } 112 \text{ visitors/day}$$

b) **Real Carrying Capacity=**

$$\text{PCC} \left(\frac{100 - \text{Cf}_1}{100} \times \frac{100 - \text{Cf}_2}{100} \times \frac{100 - \text{Cf}_3}{100} \times \frac{100 - \text{Cf}_4}{100} \times \frac{100 - \text{Cf}_5}{100} \times \frac{100 - \text{Cf}_6}{100} \right)$$

Cf₁ = Closure due to weather conditions

$$= \frac{90 \text{ days}}{365 \text{ days}} \times 100$$

Cf₂ = Crowding

$$= \frac{2 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₃ = Waste Disposal

$$= \frac{15 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₄ = Excessive Precipitation

$$= \frac{3 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Real Carrying Capacity =

$$PCC \left(\frac{100 - 24.657}{100} \times \frac{100 - 11.11}{100} \times \frac{100 - 83.333}{100} \times \frac{100 - 16.6}{100} \right)$$

$$RCC = 112 (0.75 \times 0.89 \times 0.16 \times 0.83)$$

$$= 112 \times 0.08$$

$$= 8.96 \text{ or } 9 \text{ visitors/ day}$$

(c) Effective Carrying Capacity

$$ECC = [\text{Infrastructure Capacity} \times MC] / RCC$$

(Infrastructure – 8hrs/90minutes to location + (1 Gazebos+ 4 bathroom stalls+ 1 kitchen area + 2 trails) * MC= 8 employees

$$ECC = (8 * 1/9) * 100$$

$$ECC = 0.10\% \text{ of } RCC$$

$$ECC = 8.99 \text{ or } 9 \text{ Visitors /Day}$$

Tourism Carrying Capacity Moore Town (Visitor Center and General Community; school. health center, Nanny Bump Grave, open field)

(a) Physical Carrying Capacity = Area available for public use x U/a x Rf

$$PCC = 20500 * 1/15 * 1.33$$

$$PCC = 1817.66 \text{ or } 1818 \text{ visitors/day}$$

b) Real Carrying Capacity=

$$PCC \left(\frac{100 - Cf1}{100} \times \frac{100 - Cf2}{100} \times \frac{100 - Cf3}{100} \times \frac{100 - Cf4}{100} \times \frac{100 - Cf5}{100} \times \frac{100 - Cf6}{100} \right)$$

Cf₁ = Closure due to weather conditions

$$= \frac{90 \text{ days}}{365 \text{ days}} \times 100$$

Cf₂ = Crowding

$$= \frac{2 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₃ = Waste Disposal

$$= \frac{15 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₄ = Excessive Precipitation

$$= \frac{3 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Real Carrying Capacity =

$$\text{PCC} \left(\frac{100 - 24.657}{100} \times \frac{100 - 11.11}{100} \times \frac{100 - 83.333}{100} \times \frac{100 - 16.6}{100} \right)$$

$$\text{RCC} = 1818 (0.75 \times 0.89 \times 0.16 \times 0.83)$$

$$= 1818 \times 0.08$$

$$\text{RCC} = 145.44 \text{ or } 145 \text{ visitors/ day}$$

(c) Effective Carrying Capacity

$$\text{ECC} = [\text{Infrastructure Capacity} \times \text{MC}] / \text{RCC}$$

(Infrastructure – 8hrs/90minutes to location + (1 Visitor center+ 8 bathroom stalls+ 1 general open area + 2 trails) * MC= 8 employees

$$\text{ECC} = (12.08 * 1/ 145) * 100$$

$$\text{ECC} = 26.84\% \text{ of RCC}$$

$$\text{ECC} = 106.08 \text{ or } 106 \text{ Visitors /Day}$$

Tourism Carrying Capacity Cuna Cuna Pass Trail

(a) **Physical Carrying Capacity = Area available for public use x U/a x Rf**

$$PCC = 6220 \times 1/20 \times 1.14$$

$$PCC = 354.54 \text{ or } 356 \text{ visitors/day}$$

b) **Real Carrying Capacity=**

$$PCC \left(\frac{100 - Cf_1}{100} \times \frac{100 - Cf_2}{100} \times \frac{100 - Cf_3}{100} \times \frac{100 - Cf_4}{100} \times \frac{100 - Cf_5}{100} \times \frac{100 - Cf_6}{100} \right)$$

Cf₁ = Closure due to weather conditions

$$= \frac{90 \text{ days}}{365 \text{ days}} \times 100$$

Cf₂ = Crowding

$$= \frac{2 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₃ = Waste Disposal

$$= \frac{15 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₄ = Excessive Precipitation

$$= \frac{3 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Real Carrying Capacity =

$$PCC \left(\frac{100 - 24.657}{100} \times \frac{100 - 11.11}{100} \times \frac{100 - 83.333}{100} \times \frac{100 - 16.6}{100} \right)$$

$$RCC = 356 (0.75 \times 0.89 \times 0.16 \times 0.83)$$

$$= 356 \times 0.08$$

= 28.48 or 29 visitors/ day

(c) Effective Carrying Capacity

$$\text{ECC} = [\text{Infrastructure Capacity} \times \text{MC}] / \text{RCC}$$

(Infrastructure – 8hrs/110minutes to location + (9 cabins+ 6 bathroom stalls+ 1 kitchen area) *

MC= 5 employees

$$\text{ECC} = (16.07 \times 1/29) \times 100$$

$$\text{ECC} = 55.41\% \text{ of RCC}$$

$$\text{ECC} = 13 \text{ Visitors /Day}$$

Tourism Carrying Capacity Corn Puss Gap Trail

$$\text{(a) Physical Carrying Capacity} = \text{Area available for public use} \times U/a \times Rf$$

$$\text{PCC} = 5591 \times 1/20 \times 1.14$$

$$\text{PCC} = 318.68 \text{ or } 319 \text{ visitors/day}$$

b) Real Carrying Capacity=

$$\text{PCC} \left(\frac{100-Cf1}{100} \times \frac{100-Cf2}{100} \times \frac{100-Cf3}{100} \times \frac{100-Cf4}{100} \times \frac{100-Cf5}{100} \times \frac{100-Cf6}{100} \right)$$

Cf₁ = Closure due to weather conditions

$$= \frac{90 \text{ days}}{365 \text{ days}} \times 100$$

Cf₂= Crowding

$$= \frac{2 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₃ = Waste Disposal

$$= \frac{15 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Cf₄ = Excessive Precipitation

$$= \frac{3 \text{ visitors}}{18 \text{ visitors}} \times 100$$

Real Carrying Capacity =

$$\text{PCC} \left(\frac{100 - 24.657}{100} \times \frac{100 - 11.11}{100} \times \frac{100 - 83.333}{100} \times \frac{100 - 16.6}{100} \right)$$

$$\text{RCC} = 319 (0.75 \times 0.89 \times 0.16 \times 0.83)$$

$$= 319 \times 0.08$$

$$\text{RCC} = 25.52 \text{ or } 26 \text{ visitors/ day}$$

(c) Effective Carrying Capacity

$$\text{ECC} = [\text{Infrastructure Capacity} \times \text{MC}] / \text{RCC}$$

(Infrastructure – 8hrs/110minutes to location + (9 cabins+ 4 bathroom stalls+ 1 kitchen area) *

MC= 5 employees

$$\text{ECC} = (14.07 \times 1/26) \times 100$$

$$\text{ECC} = 54.11\% \text{ of RCC}$$

$$\text{ECC} = 11.94 \text{ or } 12 \text{ Visitors /Day}$$

Appendix C- Proposed Indicators and Standards of Quality for Visitor Management

INDICATORS	Standards of Quality
Infrastructure	
Visitor center	Visitor Center must include functional sanitary facilities and be well maintained.
Level of trail maintenance seen per day	Trail maintenance should take place quarterly or as seen necessary based on weekly inspections
Level of site maintenance	Lodging facilities, restrooms, rest stops, trail and other safety infrastructure, must be inspected on a quarterly basis to ensure general repairs; cleaning and maintenance are carried out as needed.
Soil Impacts	
Percentage of park trail system with severe soil erosion	Trail erosion and soil exposure must not exceed 10% for each trail. Soil conservation measure must be in place for areas prone to excessive erosion along trails.
Vegetation Impacts	
Evidence of plant removal by visitors	There must be no removal of plants or animal species from the site by visitors.
Social Impacts	
Community Disturbance	All visitors to sacred areas must be accompanied by a local tour guide
Removal of artifacts	No artifacts must be removed from any location without prior approval from the Maroon Council and the Jamaica National Heritage Trust
Water Quality	
Use of chemicals in rivers	The use of chemicals for fishing is strictly prohibited and violators found must be prosecuted.
Site Impacts	
Waste Disposal	No garbage must be seen on trails and throughout recreational areas at any time. Garbage is to be disposed of in the provided containers and to be collected once weekly by the municipal disposal system,
Visitor Experience and Management activity	
Information given to visitors upon arrival	All visitors must be informed on the ecological value of the site upon arrival and sign log book available with emails/phone numbers.

Total number of people seen on the trail per day	Amount of visitors encountered on trails should not exceed 50 persons with a maximum of 3 groups per hike for each trail at a time.
Total number of people present at one time at the location.	Visitor numbers must not exceed XX persons per day.
Amount of visitors satisfied with the condition and availability of infrastructure (restrooms, lodging, garbage disposal, tour guides etc.)	Visitor satisfaction must not fall below 85% upon assessment.
Number of interpretive signs on trails	Interpretive signs must be present along all trails. These signs must be visible and well maintained.
Number of regulatory signs posted on trails and throughout park area.	Regulatory signs must be mounted and visible to address; littering, removal of plant and animal species on trails and in forested areas, river poisoning, touring without guides etc.
Number of Safety Signs	All high risk areas along trails and river tours must be equipped with safety signs at visible to all visitors
Availability of first aid services	All tour operators must have access to a fully equipped first aid kit.
Number of tour Guides present	All tours must be facilitated by a trained/certified tour guide

Appendix D- Questionnaires

Visitor Management- Community

The purpose of this questionnaire is to gather information that will assist the Jamaica Conservation Development Trust in calculating the tourism carrying capacity of existing and potential tourism destination in the Rio Grande Valley, with specific focus on Moore Town, Cuna Cuna Trail, Corn Puss Gap Trail and Nanny Town to some extent. This questionnaire will be used along with physical assessments to estimate the tourism carrying capacity of the areas.

1. Age Group

Mark only one oval.

15-25	46-55
26-35	Older than 56
36-45	

2. Gender

Mark only one oval.

Male	Female
------	--------

3. How long have you been a resident of the area?

Mark only one oval.

1-5 yrs	16-20 yrs
6-10 yrs	Over 21 yrs
11-15 yrs	

4. Are you aware of tourism activities occurring within you community?

Mark only one oval.

Yes	Uncertain
No	

5. Are you aware of the frequency of tours in the Rio Grande Valley?

Mark only one oval.

Yes	No
-----	----

6. If Yes, what is the frequency?

Mark only one oval.

1-2 per day	> than 5 per day
3-4 per day?	

7. Do you think Community members should be made aware of the frequency of visitors to the community and sacred areas?

Mark only one oval.

Yes	Uncertain
No	

8. On a scale of 1-5 with one being the lowest what level of disturbance do you undergo when visitors pass through your area?

Mark only one oval.

Low disturbance	High
disturbance	

9. What level of discomfort do you experience when large groups visit the community?

Mark only one oval.

No discomfort	Moderate discomfort
Low discomfort	High level of discomfort

10. How important is it that your culture is preserved?

Mark only one oval.

Not important	Very Important
Somewhat important	Uncertain

11. Do you think tourism will bring awareness to the general public on the importance of your culture?

Mark only one oval.

Yes	Uncertain
No	

12. In your estimation, what level of impact do you feel tourism will have on the natural resources present? (extraction of plants and animals, waste disposal, water pollution).

Mark only one oval.

No impact	Moderate impact
Low impact	High impact

13. Do you think there is adequate signage on the trail/tourism destinations re: the importance of conservation of the natural and cultural resources and information on important plant and animal species?

Mark only one oval.

Yes	Uncertain
No	

14. How important do you think it is to provide visitors with the above information?

Mark only one oval.

Very Important	Not Important
Important	Somewhat Important

15. Do you think tourists should be allowed in the recreation area without guides?

Mark only one oval.

Yes	Sometimes
No	

16. Do you think there is cohesiveness amongst the different tour companies present?

Mark only one oval.

Yes	Uncertain
No	

17. How important do you think it is for all tour companies do work together?

Mark only one oval.

Not important
Somewhat important
Very Important

Visitor Satisfaction

The purpose of this questionnaire is to gather information that will assist the Jamaica Conservation Development Trust in estimating the tourism carrying capacity of existing and potential tourism destination in the Rio Grande Valley, with specific focus on Moore Town, Cuna Cuna Trail, Corn Puss Gap Trail and Nanny Town to some extent.

Some questions may require more than one response

1. Age Group

Mark only one oval.

- | | |
|-------|---------------|
| 15-25 | 46-55 |
| 26-35 | Older than 56 |
| 36-45 | |

2. Gender

Mark only one oval.

- Male
Female

3. Which area (s) in the Rio Grande Valley have you visited?

Check all that apply.

- | | |
|----------------------------|-------------------------|
| Moore Town Visitors Center | Nanny Town |
| Nanny Falls | Rio Grande Health Farms |
| Cuna Cuna Trail | Other, Please Specify |
| Corn Puss Gap Trail | |

4. What is the frequency of your visits?

Mark only one oval.

- | | |
|--------------------|-------------------------|
| 1-2 times per year | > than 5 times per year |
| 3-4 times per year | |

5. Which of the following is your preferred traveling style?

Check all that apply.

- | | |
|-------------------|------------|
| Family Group | Individual |
| Educational Group | Other |
| Friend Group | |

6. What is your normal group size?

Mark only one oval.

- | | |
|-------------|--------------|
| 1-4 persons | > 10 persons |
| 5-9 persons | |

7. What is/ are your reason (s) for visiting?

Check all that apply.

- | | |
|-----------------------|---|
| Relaxation | Hiking |
| Observation of Nature | Educational - Learning about the maroon |
| Religion | Culture |
| Camping | River Tubing |

8. How long is your usual visit?

Mark only one oval.

Less than 1 hour

1-6 hours

7-12 hours

> than 12 hours

9. How does overcrowding of the location visited affect the quality of your experience?

Mark only one oval.

Does not affect experience

Affects experience somewhat

Significantly affects experience

10. On a scale of 1-5 rate how the following would lower the quality of your experience with five being the highest level of impact

Mark only one oval.

Removal of Vegetation

Mark only one oval.

1 2 3 4 5

Waste Disposal (littering)

Mark only one oval.

1 2 3 4 5

Excessive Precipitation

Mark only one oval.

1 2 3 4 5

Damaged or low quality infrastructure

Mark only one oval.

1 2 3 4 5

Accessibility of location

Mark only one oval.

1 2 3 4 5

Lack of relevant infrastructure such as bathroom facilities, safety feature, lodging.

Mark only one oval.

1 2 3 4 5

11. How much space do you (or your group) require between yourself and other groups to fully enjoy your experience?

Mark only one oval.

3-5 ft

5-10 ft

10-15 ft

15-20 ft

More than 20 ft

I Dont Know

12. What is your level of satisfaction with the quality of service offered and locations visited?

Mark only one oval.

Not satified

Moderately Satisfied

Very Satisfied

Uncertain

13. Do you require additional facilities in the recreational areas to improve the quality of your experience when you visit

Mark only one oval.

Yes

No

14. If Yes, What additional facilities do you require?

15. On average how many people do you see when you visit?

Mark only one oval.

- | | |
|---------------|----------------------|
| Less than 5 | 15-20 persons |
| 5-10 persons | More than 20 persons |
| 10-15 persons | |

16. What did you enjoyed most about your visit?

Check all that apply.

- | | |
|---------------------------------------|------------------|
| Trail Hike | Educational tour |
| Viewing Wildlife and Vegetative cover | River tubing |
| Camping | Other: |

17. On average, how many groups do you encounter when you visit?

Mark only one oval.

- | | |
|-----|-----|
| 0-2 | 5-6 |
| 3-4 | > 7 |

Visitor Knowledge

18. Were you previously aware of the ecological culture value of the site (s) visited?

Mark only one oval.

- Yes
No

If yes, how were you aware

19. Do you clearly understand the ecological culture value of the site (s)?

Mark only one oval.

- Yes
No
Somewhat

20 In your own words describe the importance of the site (s)

21. Which of the following do you consider important to the site (s) and surrounding areas?

Check all that apply.

- | | |
|--|--|
| Vegetative Cover | Minimal Crowding |
| Wildlife | Provision of educational information on ecological value of the site |
| Suitable and well maintained infrastructure (restrooms, lodging etc) | |

22. Have you ever done a trail hike while it was raining or immediately after it rained?

Mark only one oval.

- | | |
|-----|------------------|
| Yes | I Don't Remember |
| No | |

23. Should hiking be permitted while it rains or immediately after it rains?

Mark only one oval.

- | | |
|-----|--------------|
| Yes | I Don't Know |
| No | |

24. Have you ever taken any sort of vegetative cover or artifacts from site (s) ?

Mark only one oval.

Yes
No

Prefer not to say

25 If Yes, what have you removed?

26. Do you take along any of the following when visiting the location?

Check all that apply.

Motorbikes	Bicycles
All- Terrain Vehicles (ATV's)	None of the above
Drones	All of the above

27. Do you think any of the above negatively impacts the site (s)?

Mark only one oval.

Yes	I Don't Know
No	

If yes, Briefly explain how

28. What level of impact do you think you have on the site (s) visited?

Mark only one oval.

Low Impact	Severe Impact
Moderate Impact	No Impact

29. Which of the following do you think may occur as a result of visitation to the site (s)?

Check all that apply.

Soil erosion	Excessive noise
Wildlife disruption	Community disruption
Vegetative removal	No impact
Infrastructural damage	

29. Do you think the above impact (s), if any, is/are a threat to the sustainability of the site (s)?

Mark only one oval.

Yes	I Don't Know
No	

30. Do you think there is adequate signage on the trails/tourism destinations re: the importance of the conservation of the natural and cultural resources and information on important plant and animal species?

Mark only one oval.

Yes	No	Uncertain
-----	----	-----------

31. If no, do you think the addition will improve the quality of your experience?

Mark only one oval.

Yes	Uncertain
No	

32

. Are there any recommendations you would make to management that may increase your level of satisfaction with the tourism product offered?

Management Interview

The purpose of these questions is to gather information that will assist the Jamaica Conservation and Development Trust in calculating the tourism carrying capacity of existing and potential tourism destination in the Rio Grande Valley, with specific focus on Moore Town, Cuna Cuna Trail, Corn Puss Gap Trail and Nanny Town to some extent. This questionnaire will be used along with physical assessments to estimate the tourism carrying capacity of the areas.

1. Are you resident of the area?
2. If a resident, how long have you lived in the area?
3. Which area(s) do you operate
4. If other, please specify.
5. Is this sufficient to carry out operations in a sustainable manner ?
6. Do you have trained tour guides? If Yes, how many?
7. Are there adequate bathroom facilities available for visitors during visits to your location (s)
8. If yes, how many are there?
9. What is the estimated size of the area used for recreation?
10. What is the average number of visitors you receive on a monthly basis?
11. Is there an established quota for the visitor number?
12. If yes, what is the quota?
13. Is there any established limit for spacing between visitor (s) group?
14. Are large groups (exceeding 20) allowed on tours or to the site?
15. If yes, how often?
16. What impact do these events have on the area in terms of; water disposal, water pollution, soil erosion etc)?
17. Do you think tourism in the Rio Grande Valley should be regulated by a management plan?
18. Who do you think Should be responsible for monitoring the tourism management plan for the Rio Grande Valley?
19. Which of the following have been observed or reported by the guides over the last 2 years as a result of visitors?
20. Are there any established system (s) in place to monitor or manage visitors impacts
21. Marketing of tourism in the Rio Grande Valley is done effectively
22. How important do you think it is for there to be collaboration amongst different tour guide

Appendix E- Interview Questions

Nanny Town Interview Questions

The draft 2017 – 2027 Blue and John Crow Mountains (BJCM) National Park management plan for this globally significant protected area recommends that plans exist for increased visitor use to ensure that recreational use does not have a negative impact on the natural and cultural heritage values. In preparation of the Conservation and Visitor Use Management Plan for targeted sites in the Rio Grande Valley namely: Moore Town, Cunha Cunha Trail and Corn Puss Gap Trail, assessments were conducted to determine existing tourism use, uses not compatible with sustainable tourism along with potential environmental and conservation issues. A challenge however existed in conducting a physical assessment of Nanny Town due to its remote location. This questionnaire is intended to gather pertinent information regarding current and potential use of Nanny Town along with uses not compatible with sustainable tourism.

1. Are you aware of current ecotourism activities currently taking place which includes trail hikes to Nanny Town? If yes, describe activities.
2. What are your views on current and potential ecotourism activities which involve trail hikes to the Nanny Town site?
3. In your estimation, what are the existing /potential impacts (positive/negative) to the natural environment that have/may arise as a result of tourism activities to Nanny Town?
4. In your estimation, what are the existing /potential impacts (positive/negative) to the cultural heritage (tangible and intangible) that have/may arise as a result of tourism activities to Nanny Town?
5. In your estimation, what are the existing/potential impacts (positive/negative) towards residents of the Maroon community that have/may arise as a result of tourism activities to Nanny Town?
6. What limitations exist that will prevent proper management of ecotourism current and potential ecotourism activities to the location?

7. What are your views on having the Jamaica Conservation and Development Trust (which manages the wider National Park and World Heritage Site on behalf of the Government of Jamaica) managing and monitoring visitation to Nanny Town?
8. Do you think the site should be open to large volume tourist groups and what would you consider a large volume? Reason for response
9. Which of the following management options would you propose for controlling visitor numbers to the site?
 - a. restricting entry or closing the area completely to visitors
 - b. limiting group sizes
 - c. implementing a quota or permit system
 - d. Charging high fees for entry
 - e. Not providing facilities (restroom etc.)
10. Would you consider offering visitors the option of hiking the Nanny Town trail but bypassing Nanny Town as an alternative in an effort to protect the cultural integrity of the site?
11. Are there any archaeological sites of interest along the trail or at the location that will require planning for protection? (Answer only if you have visited)
12. On a scale of 1-5 with 5 being highest impact, what is the potential for disruption to exotic/endemic flora and fauna if visitors are allowed to trek the area? Provide reason for response.
13. Do you believe visitor safety and security will become or is an issue along this trail? If yes, what provisions do you feel can be made to ensure visitors are not at risk while exploring this area?

Appendix F- Community Action Items

Recommended actions community may take to prevent harm/damage to Natural and Cultural Heritage and ensure Socio-Economic benefits are realized

Issues	Action Items	Responsible Personnel	Timeline
Soil Erosion/Landslides	<p>Assess trails and ensure that they have proper drainage, especially areas prone to land slippage and that these drains are regularly maintained.</p> <p>Plant trees/bushes in exposed areas to promote soil stability.</p> <p>Use gravel/river stones in areas that encourage water collection and settling.</p> <p>Use wood/bamboo to create retaining walls for loose areas.</p> <p>Create steps using bamboo on steep slopes</p>	CDC, Maroon Council, BPFA	TBD
Waste Disposal	Collect all waste from tours and where possible make	CDC, Maroon Council,	TBD

Issues	Action Items	Responsible Personnel	Timeline
	<p>arrangements for tour company to take back the non-biodegradable waste (can't rot) e.g. plastics. Where this is not possible bury waste.</p> <p>Use biodegradable waste for compost and where possible use leftover food as meal for dogs/animals.</p> <p>Lobby for Community Skip & Garbage Collection - make sure that the commercial waste e.g. from shops is paid for</p> <p>Encourage community and visitors not to litter through public meetings and possible simple signage throughout community.</p>	BPFA	
Plant/Animal/ Artifact Extraction	<p>Encourage visitors and community members to refrain from extracting plant/animal species or artifacts from areas.</p> <p>Create “green house” for propagating flowers/plants that visitors may purchase</p> <p>Replant items extracted for medicinal or other</p>	CDC, Maroon Council, BPFA	TBD

Issues	Action Items	Responsible Personnel	Timeline
	purposes.		
Cohesiveness and Collaboration	Form community tourism committee which includes at least one member from each tour group/Maroon Council	CDC, Maroon Council, BPFA	TBD