
CHAPTER 7: SOCIAL IMPACT ASSESSMENT

7.1 THE RATIONALE

This chapter addresses the social and socio-economic impacts generated by the Flic-en-Flac link road project – whose social stakeholders have already been identified in Chapter 4 entitled “*Characteristics of the Social Stakeholders*”

7.2 THE APPROACH

The Report includes a Social Needs Analysis (SNA) which has led to the elaboration of the Social Development Plan (Programme) and a Social Impact Assessment (SIA) for the core catchment area concerned with the FEFLR project corridor and alignment, namely the Morcellement Safeland and the Morcellement De Chazal and the outer catchment area which is the Flic-en-Flac Village Council Area (VCA) encompassing the FEF village.

The Social Needs Analysis, which is described in Section 7.3 below, has analysed the socio-economic situation of the catchment area and the ‘village’, the existing facilities available and ways to improve the living and environmental conditions of the inhabitants of the catchment area i.e. both the core catchment area and the surrounding overall village of FEF.

The Social Impact Assessment (SIA) has identified the impact of the proposed project on the immediate area adjacent to the project corridor. It has also evaluated the intended and unintended social consequences of the project and has provided measures to contain the negative impacts.

It is worth remarking that contrary to coastal villages and deprived regions wherein SNA and SIA are often conducted in the wake of IRS development projects, the SNA and SIA in this specific assignment, have been conducted in a study area wherein middle and high class categories reside. Hence, the social needs are more oriented to amenities/ infrastructures than to socio-economic initiatives.

7.3 SOCIAL NEEDS ANALYSIS (SNA)

By definition, the SNA is the analysis of the social needs of the region where a given development is proposed, in terms of social amenities, training, community development and other facilities and their estimated costs and implementation schedule.

The achievement of the above depends on:

- An analysis of the socio-economic data and realities of the region concerned
- Knowledge of the inhabitants’ perceptions regarding their standard of living and expectations in terms of needs and means of satisfying such needs;
- An audit of all existing social infrastructure within the region in question.

Based on the above, an assessment and ranking of different needs in order of priority is conducted. The final outcome of the SNA takes the form of concrete proposals to meet the most important social needs.

7.4 CATCHMENT AREA

The proximity to the proposed Link Road corridor has been the prime criterion according to which the catchment area has been defined.

In this context, the catchment area referred to as the Core Catchment Area has been identified as the area along and adjacent to the proposed project corridor; it covers principally the residential areas of Morcellement De Chazal and Safeland – which are the most concerned catchment area.

The Flic en Flac VCA can be characterized by two clearly demarcated regions namely

- the ‘village’ commonly referred to as ‘centre’ wherein most social infrastructures are located and which is also referred to as the Outer Catchment Area.
- the residential areas of the two major Morcellements De Chazal and Safeland which developed as from the 1990’s.

The core catchment area is characterised by different types of occupancy, as described below:

- (i) housing units which are not inhabited,
- (ii) a number of dwellings which are not inhabited for the reason that their owners live abroad
- (iii) many housing units which are used for short (seasonal guests), medium and long term rent, i.e. those which are used as secondary residences
- (iv) the principal residences which are occupied on a permanent basis by the local population.

7.5 METHODOLOGY FOR SNA AND SIA

As explained above, an integrated methodology, including both qualitative and quantitative research, (where possible and meaningful) and field observations have been used for the elaboration of the SNA and the SIA. The components of the methodology are described below:

- (i) For the quantitative aspects, the following source of information has been gathered and analyzed:
 - the collection, treatment and presentation of census data available from the Central Statistical Office (CSO): demographic characteristics, housing living conditions ,education, employment, household characteristics, relative development index .

Note: *The collection of secondary data is of utmost importance because it enables to have a good grasp of the socio-economic realities of a given region.*

- Statistics, which have been collected during desk research, include, among others:
 - Population by VCA;
 - Relative Development Index, rankings;
 - Educational statistics and literacy rates;
 - Economic activities and major employment pools;
 - Access to basic services (water, electricity, toilet facilities).
- (ii) For the qualitative aspects, an extensive consultative phase was conducted in order to investigate the perceptions that the inhabitants of the catchment area hold on their socio-economic and physical environment, in order to ascertain their expectations, needs and fears.

The qualitative approach has privileged a participatory method through:

- Consultations with Forces Vives, residents, representatives of the Village Council Flic en Flac VCA

Note: *The Notes of Meeting with the Forces Vives and the FEF Village Council are enclosed at Annex 7A at the end of Chapter 7.*

- Informal discussions with key informants: local decision-makers, President of Senior Citizens Association, Forces Vives Flic en Flac.
- Focus Group discussions with residents of the core catchment area and outer catchment area and face to face interviews (120) have been conducted both among residents and hotels located in the close vicinity and concerned by the proposed project.

(iii) Audit of existing community infrastructures and facilities

- In addition to collecting primary and secondary data, an audit of the existing infrastructure was undertaken within the catchment area and the outer area (the Flic en Flac VCA).
- This audit has given a precise picture of infrastructure, which is lacking in many respects within the region.
- It has to be underlined that all the community facilities are concentrated in the heart of the 'village'.

Table 7.1 below lists out the results of the infrastructure audit.

Table 7.1: Infrastructure Audit within the Core Catchment Area and Outer Catchment Area

Category	Name	Locality
Community and Social	Flic en Flac Police Station	Outer catchment area
	Cemetery	Catchment area
	S.I.L.W.F Flic en Flac Community Centre	Outer catchment area
	Flic en Flac Village Hall	Outer catchment area
	Flic en Flac Community Health Center	Outer catchment area
	CLAC (Centre de Lecture & d'Animation Culturelle Flic en Flac (Ministère des Arts et de la Culture)	Outer catchment area
	Football pitch and a cloak room	Outer catchment area
	Volleyball Pitch	Outer catchment area
	Flic en Flac Government School	Outer catchment area
Religion	Kalimaye Temple, ST Marc Church, Christ	Core & Outer catchment areas

7.5.1 The Study Area

Flic en Flac VCA is clearly demarcated by two or more areas: the centre of Flic en Flac VCA itself referred as '*village*' and the residential areas namely Morcellements De Chazal and Safeland built in the 1990's. The second is essentially characterized by private properties owned by families of the middle and high income groups.

The residential areas (Morcellements De Chazal and Safeland) being the study area, are referred to as the "*Core catchment area*" and the '*FEF village*' as the outer catchment area.

As for the quantitative analysis, the study was based on the 2011 Census figures for its analysis and insight into socio-economic characteristics of the area, complemented by field survey undertaken to audit the community facilities existing in the catchment area and the outer catchment area.

7.6 THE ECONOMIC SITUATION

7.6.1 Employment Characteristics

The Table 7.2 below gives the current activity status of the active population of the FEF area taken as the population from the age of 16.

Note: *This table is based on the 2011 CSO Census.*

Table 7.2: Current Activity Status of Active Population of Flic-en-Flac Area

Current Activity													
Currently active						Not currently active							
		Total	Employed	Unemployed		Total	Household duties	Studies	Disability	Retirement		Other & Not stated	
				Total	First job seekers	Worked before							
Flic en Flac VCA													
Both sexes	1,769	1,087	1,011	76	50	26	680	287	109	33	224	27	2
Male	875	652	615	37	22	15	221	1	48	18	145	9	2
Female	894	435	396	39	28	11	459	286	61	15	79	18	-

An analysis of Table 7.2 above leads to a few very interesting results:

- (i) The current active population (16-60) is 61.4% of the total population
- (ii) The female population not-currently active is 25.9% of the total population - which seems to be on the high side.
- (iii) The unemployed rate is 4.3% - which appears to be lower than the national average.

7.6.2 Economic Activity

(i) Major Employment Pools

Even if figures related to major employment sectors for the catchment area were not available, discussions and individual interviews have revealed that most of the middle-aged adults were employed as executives and managers or self-employed, and the large majority of habitants of the outer catchment area were employed in hotels (as managers, waiters, skippers, housekeeping and beach-boys), in shops as shop attendants, in restaurants and bars located in Flic en Flac. Besides, the majority of women working as house-maids, babysitters were employed by private individuals. Few fishermen and labourers were still currently active.

(ii) Business Activity

The catchment area has been subject to an unprecedented wave of tourism-related development since the year 2000, resulting in an increase in business activities within the VCA of Flic en Flac. Restaurants, bars, snacks, hairdressers, Beauty Parlour, Spa centres, Tour Operators, Diving Centres, Shopping malls, Designers' shops, Money Changers, Guest Houses were gradually developed.

In parallel with the formal business activity, a new trend emerged with the informal small activity commonly known as '*roulotte*'- hawkers on the beach. This uncontrolled activity has stretched out on the public beach and there are about 20-30 of them in operation.

It has been reported that the large majority of the owners of this business were '*outsiders*' as referred to by the locals.

The locals felt excluded from this development opportunity; the Tourism Authority and the Beach Authority, as reported by them, have privileged outsiders and not people of Flic en Flac. During Focus Group discussions, they expressed their frustration because their requests for licenses to start a small business (for example pleasure craft, snack) were refused to them or never had any reply.

7.7 THE GENERAL LEVEL OF DEVELOPMENT

7.7.1 Relative Development Index

The Central Statistical Office (CSO) has elaborated a composite development index for the Village Council Areas (VCA) and Municipal Council Areas (MCA) of the Island of Mauritius.

This index, which indicates the general '*level of development*' of all VCAs and MCAs, has been calculated based on selected variables such as living conditions (access to water, electricity, type of house etc.), level of education, and professional situation (activity status, nature of job, etc.) from the 2011 Housing & Population Census.

The Table 7.3 illustrates the relative development indices for the VCA's situated within the western and south-western part of Mauritius under study in year 2011.

Table 7.3: Relative Development Index (RDI) for Relevant VCA's Census 2011

VCAs	Relative Development Index (RDI)	Rank in descending order of RDI Census 2000	Rank in descending order of RDI Census 2011
Flic en Flac VCA	0.8465	17th	5th
Bambous VCA	0.6545	129th	134th
Gros Cailloux VCA	0.6516	139th	135th
Chamarel VCA	0.6475	137th	136th
Case Noyale VCA	0.5769	141th	143rd
Le Morne VCA	0.4613	145th	145th

Note: Index value 0 implies least development, index value 1 implies highest development

The analysis of Table 7.3 reveals the following:

- (i) The RDI ranking for the VCA of Flic-en-Flac has significantly progressed from 17th in Census 2000 to reach 5th in the total ranking in 2011 for the Island of Mauritius. The Real-Estate boom in Flic-en-Flac followed by the development of residential areas in the mid 2000's is responsible for this progress.
- (ii) The Flic-en-Flac VCA is located in the Black River District wherein the least developed VCA's rankings when compared islandwise were 134th, 135th and 136th, 143th and 145th.

7.7.2 Standard of Housing and Access to Basic Facilities

7.7.2.1 Standard of Housing

In 2011, 91% of households were living in dwellings made up of concrete walls and roofs within the VCA of Flic en Flac.

7.7.2.2 Access to Water and Electricity

According to Census 2011, 99.8% of households were equipped with piped water and 100% of households in Flic en Flac VCA were connected to electricity. However, inhabitants of residential areas of Morcellements Safeland and De Chazal (catchment area) complained that they were affected by regular electricity cuts around twice a week.

7.7.2.3 Toilet Facilities

90.6% of the households in Flic en Flac VCA were using flush toilet in 2011.

7.7.2.4 Refuse Disposal

During fieldwork, the interviewees expressed their satisfaction about the service provided by the District Council of Black River. The household refuse was regularly collected by an authorized collector twice a week.

7.7.2.5 Drainage

The topography of the residential areas of Morcellements De Chazal and Safeland has flood-prone characteristics. During heavy rainfall, all the drains are overflowed. The road infrastructure was not strong so as to be long-term resistant to heavy rains. Because of the material damage caused by the surface run-off and accumulation of water, this problem caused a great deal of frustration among the inhabitants of the catchment area.

It was reported that during periods of heavy rains, several housing units are flooded, so that people could not walk out of their house.

Because of risks associated with heavy rains and storm-water, inhabitants were unanimous to the effect that the catchment area seriously needed to be equipped with adequate drainage collection and disposal facilities.

7.8 ACCESS TO TRANSPORT AND OTHER FACILITIES

7.8.1 Access to Public Transport

- Private buses operate in Flic en Flac;
- The private bus drivers are perceived as not respecting the regulations regarding bus stops. As such, they cause traffic congestion and constraints for other drivers as well as the public travelling in their bus. It was reported during meetings with Forces Vives and Village Council members, that this issue has been occurring for years and that the relevant Authorities have not been able to solve this problem. The potential risk of accident in that area (near the traffic light before the Police Station) has increased because of this illegal practice.

After recording this complaint through the SCP, the study team investigated this practice on the spot. It came to light that the private buses have the habit of stopping at a non-existing bus-stop right opposite another one although a purposely-constructed bus lay-by exists at about some 100 metres further away.

The photographs at Figure 7.1 below provide evidence of this occurrence.



Figure 7.1: Photograph of Bus-Stops Causing Problems

Note:

- (i) *Private buses stop at Sunset Snack (see photo) in front of the existing telephone booth although a bus lay-bye exists at some 100 metres away. As can be seen from the photograph, there is no bus stop there.*
- (ii) *The bus stop in front of Marco Polo is the existing one, clearly demarcated by a bus-stop sign.*

However, it is important to highlight that no complaints have been made against routes run by the NTC.

7.8.2 Ownership of Private Vehicles

Given the purchasing power of the inhabitants of the catchment area, ownership of cars and other vehicles is widespread whereas ownership of motorcycles and bicycles was more common among inhabitants of the 'village'.

7.8.3 Access to other Facilities

Although there are ATM services, there are no commercial banks in Flic en Flac and the inhabitants have no choice but to travel to Bambous or more recently to Shopping Village Cascavelle for banking transactions, Cascavelle considered as being the nearest economic hotspot to the inhabitants of the catchment area.

7.8.4 Educational Characteristics

7.8.4.1 The Primary Cycle

The only primary school (Flic en Flac Government School) is located at the entrance of Flic en Flac, at about 1km from the centre of the village and doesn't fall within the core catchment area.

It was reported that the threat of closure facing the primary school was related to the low percentage of children enrolled. In 2011, the primary enrolment ratio was 91%, but appears to have steadily decreased since then.

7.8.4.2 The Secondary Cycle

There is no secondary college in Flic en Flac VCA. The students mainly residing in the 'village' are enrolled in secondary schools in Bambous, whereas very few of those living in the catchment area attend private and public secondary schools in Plaines Wilhems.

In 2011, 32.2 % of the population aged 18 years and over had an educational level equal to School Certificate or more whereas the Secondary enrolment ratio was 64 %. The literacy rate of the population aged 10 and over was 87.5% in 2011.

7.9 HEALTH

7.9.1 Health Services Operating within Flic en Flac VCA

The VCA of Flic en Flac is home to only one public health facility – the Community Health Centre (commonly called '*dispensary*') which is located in the heart of the village, facing the football pitch.

The Health Community is providing health and medical care to both the locals and visitors for example, people working in Flic en Flac, as well as tourists.

According to the medical officer on duty, the dispensary has medical records for 400 patients.

For further examinations, patients are recommended to attend the Black River Area Health Centre.

Besides, two private clinics are operational (St Patrick and Clinique de L'Occident). There are at least 2 chemist shops, medical practitioners and private doctors as well.

7.9.2 Level of Satisfaction with Community Health Centre

In general, inhabitants of the catchment area are relatively satisfied with the level of service offered by the Flic en Flac Community Health Centre. They find it easy to walk down and have their medical control tests. Easy access to medical services enables visitors working in Flic en Flac and tourists to benefit from quality care, moreover with least waiting time (and hence time saved) as a result of low frequency. The interviewees have expressed their satisfaction with regard to the quality and access to medical and health care.

The Flic en Flac VCA can be perceived to benefit from a good coverage in terms of medical services, except for important medical health problems, for which residents in general would attend hospitals or private clinics in Plaines Wilhems.

7.10 SPORTS AND LEISURE

7.10.1 Sports and Leisure Infrastructure

An inventory of the existing sports and leisure infrastructure was carried out by the project team, and the findings are reproduced in Table 7.4 below:

Table 7.4: Sports and Leisure Infrastructure Available Within the Village Outer Catchment Area

Facilities	Location
S.I.L.W.F Flic en Flac Community Centre	Flic en Flac 'village'
Flic en Flac Village Hall	Flic en Flac 'village'
Flic en Flac Community Health Centre	Flic en Flac 'village'
CLAC (Centre de Lecture & d'Animation Culturelle Flic en Flac	Flic en Flac 'village'
Football pitch and a Cloak Room	Flic en Flac 'village'
Volleyball pitch	Flic en Flac Village

From the Table 7.4 above, it is clear that sports/leisure infrastructure within the catchment area is inexistent whereas, the 'village' seems to be more adequately equipped in terms of sports/leisure infrastructure.

The locals interviewed were quite satisfied with facilities catering for leisure activities. Both the residents of the catchment area and the village usually make use of the Village Hall for different purposes like meetings, as well as social and leisure activities.

During fieldwork in the catchment area, it was reported that in terms of recreational activities, there was a lack of amenities, for instance a children playground.

7.11 SOCIAL ILLS

7.11.1 Overview

Flic en Flac is a tourist spot, located within the outer catchment area. Night life during weekends and holidays becomes very hectic for the residents of this area.

The tendency to emphasize the prevalence of social ills was clearly noted during discussion with residents. The inhabitants of the area under study portrayed a negative image of their residence place.

Consumption of alcohol is widespread. High consumption of alcohol frequently results into alcohol-related incidents like violence and misconduct.

Moreover, many housing units in the catchment area are used for renting and as reported by some interviewees, many flats and houses are reportedly operating as brothels.

7.11.2 Law and Order

Law and order was perceived as being non-effective with regard to police intervention— there have been continuous requests relative to noise and misconduct behaviour. The opinions largely attributed this flaw to a serious lack of manpower to attend to the requests of the public. The study team took note that the VCA of Flic en Flac was given its own police station in the year 2000.

The Forces Vives Flic en Flac normally hold a monthly meeting with the Police to discuss issues of law and order pertaining to the locality.

7.12 HUMAN ISSUES

7.12.1 Relationship between Inhabitants

Interviewees highlighted the level of understanding between the residents of the outer catchment FEF VCA and those of the more recent Morcellements de Chazal and Safeland considered as the core catchment area – established later i.e. around the year 2000. Since 1990, the Forces Vives of Flic-en-Flac have existed and have constantly played a significant role in the construction of social cohesion among the residents of Flic en Flac VCA and those of the Morcellements Safeland and De Chazal.

7.12.2 Belonging and Despair

Although they showed attachment to their living place, the residents of the catchment area have expressed their frustration and despair about the rapid and uncontrolled development which has taken place recently and its negative impact on their living environment. Fear, stress and despair were perceived to be the residents' state of mind. Many of them reported having invested in the purchase of land and house construction in the 2000's, worked hard only to regrettably find out that their quality of life was being seriously changed.

7.13 LOCAL GOVERNMENT

7.13.1 The District Council of Black River

The Village Council of Flic en Flac works under the aegis of the Black River District Council. The Village Council and the District Council were relatively well perceived by the inhabitants of the catchment area.

For example, the different opinions expressed that the Black River District Council was very effective in terms of refuse collection and also for attending to minor problems, for example, changing burnt light bulbs, after due notification to the responsible offices.

On the other hand, the residents were quite unhappy with the same Authority as far as building permits were concerned. They described the deterioration of their living environment as a consequence of the uncontrolled development occurring in Flic en Flac.

7.13.2 Traffic Sign

The Pearle Beach Resort and Spa, during the consultation process, complained that the existing directional road sign placed at the curve in the FEF Coast Road next to the entrance of the hotel, and showing the direction towards Wolmar had been damaged since about 2 years ago and that it had not yet been repaired.

Photographs of the road sign in question are shown in Figure 7.2 below:



Figure 7.2: Photographs of Damaged Directional Road Sign

7.14 SUMMARY OF RESEARCH FINDINGS

A summary of the findings discussed and collected during the course of fieldwork is presented in the Table 7.5 below:

Table 7.5: Summary of Findings

Category	Findings
Population	Flic en Flac VCA has a population size (2197) according to population Census 2011 and in year 2000 its population size was 1698. 5% of the population is 1-4 years old, 25 % among age group <20, 60% among age group 20-59 and 15% is aged >60 years. More than 50% of the population is among the age group 'currently active'.
Household Characteristics	According to Census 2011, there was 63.7% of owner-occupied households. Individuals have started to invest as from 1990's in land purchase and construction of houses. Actually they are apprehensive about the rise of potential loss of value of their properties being given that the proposed road corridor is close to their houses. They were reassured when they learnt that a reasonable buffer will be respected between their houses and the road alignment.
Religious Practices and Social Involvement	The St Marc Church, the Kalimaye, the Light Christ Church are religious structures present in the locality of Flic en Flac. The core catchment area is adjacent to one religious structure - the Kalimaye, which is very well-known and attended by the faithful devotees and visitors from other areas.
	The Association " <i>Seniors de l'Ouest</i> " and the Forces Vives of the village are socially active. It was reported that recreational activities and outings are regularly organized to counter-balance the lack of recreational amenities in the locality.

Economic Activity & Employment	Even if figures related to major employment sectors for the catchment area were not available, focus group discussions and individual interviews have revealed that the majority of middle-aged adults work at management level or are self-employed.
	In parallel with the tourist development in that area, many other businesses have emerged (restaurants, bars, clubs, designer shops, Tour operators, diving centres, beauty parlours, spa centres, Money changers, Guest houses, etc. thus creating employment.
	The development of business activities has been relatively important within the locality of Flic en Flac. According to the inhabitants, the allocation of licenses has not been done on a fair basis by the relevant Authorities (Tourism Authority and Beach Authority). Hawkers on the public beach are owned by 'outsiders'. A growing number of hawkers have set up their activities along the public beach, and this is perceived as an eyesore.
	A high proportion of active inhabitants are presently employed in all 9 hotels. Given the proximity and long existence of the Médine Sugar Estate, a proportion of active inhabitants are presently employed as agricultural workers.
General Level of Development	In 2011, the percentage of households living in dwellings of concrete walls/roof within the VCA of Flic en Flac was 91%.
	Figures from Census 2011 show that 99.8 % households are using piped water, 100 % households were connected to electricity, 95.4 % households are using flush toilet.
	Inhabitants of the catchment area complain that they are affected by regular electricity cuts, at least once or twice a week. More importantly, these electricity cuts have more important impacts on the inhabitants who rely on an electricity-driven water pump in order to have access to piped water supply within their household. Those having no tanks or pumps face real water-supply problems.
	Because of the topography of the core catchment area (previously wetland, sand quarry developed into real estate), it is a prone to flooding in times of heavy rainfall, as was the case in the first fortnight of January 2015 and early March 2015. In the absence of an adequate drainage system, the residents are affected by damages in their property and become desperate. They are often stuck in their houses because of rising levels of accumulated water.

	Avenue Carrière, the road at the eastern boundary of the catchment area of Morcellement De Chazal has been resurfaced completely last November 2014. However, the drains are not working properly and they are supposed to be connected to the natural water course in the hunting ground.
Access to Public Transport and other Facilities	Private bus operators are inefficient. For instance, private buses take a long time to reach their destination and very often run behind schedule. They do not respect the existing traffic regulations and stop in a haphazard way along their route.
	There are no commercial banks within Flic en Flac VCA. As a result, inhabitants in general have to travel to Bambous or Cascavelle for their banking transactions.
Education	It was reported that the Flic en Flac Government School was experiencing low enrolment. The majority of the children attending this school come from the FEF Village and are from the families living in the FEF VCA.
	It was reported that the student population was not significant in the outer catchment area. In fact, there are no secondary school within FEF VCA. The low percentage of students travels to Quatre-Bornes or Bambous for secondary schooling.
	The rate of literacy for the age group of 10 years and above was 87.5% in 2011.
Health	In general, inhabitants of Flic en Flac VCA are relatively satisfied with the level of service offered at the Community Health Centre. It offers an extensive range of services both to its patients, 'outsiders' and tourists. The inhabitants from the catchment area have expressed their satisfaction with regard to the quality and ready access to medical and health care offered at the Community Health Centre. In addition, 2 private clinics (St Patrick Clinic and Clinique de l'Occident), 2 chemist shops and private doctors offer their medical services to the population of Flic en Flac.
Sports and Leisure	Sports infrastructure is not evenly spread from a geographical perspective. For example, all the sports facilities are spread in the 'village' and this can be explained by their creation as far back as the 1990's. No recreational playground for children has been created within the recent past.

	The Flic en Flac Village Hall and the S.I.L.W.F community centre host facilities or organize activities for both residents of the morcellement and the 'village'. The football pitch in the 'village' is widely used and is equipped with a cloakroom. A petanque court, tennis court, basket and volley ball pitches are located in the 'village' (in the outer catchment area). The residents of the core catchment area and the 'village' use the same facilities. A good interaction and a community spirit exist among the residents of Flic en Flac in general. During the interview, they stated that <i>'there were no barriers'</i>.
Local Government Refuse Collection & Other Services	The Black River District Council is perceived by inhabitants of the residential area as providing efficient services and quick intervention with regards to repairs of street bulbs. The service of the refuse collector was reported to be <i>"a five star service"</i> provided twice weekly. However, the Telecom Services are low performing as expressed by residents, with regards to their interventions on disruptions caused by heavy rains, depriving them of their internet connection
	The Village Council and the District Council are positively perceived by the inhabitants of the catchment area. In fact, one of the Village Council members would walk around once a week and note all complaints from the inhabitants of Flic en Flac. According to them, the negative point regarding the Black River District Council is the lack of supervision and monitoring with respect to uncontrolled development. The existing regulations are not apparently respected with regards to new constructions.
Environnement (Noise Pollution and Traffic)	Night life in Flic en Flac, a touristic area, is very intense. As the catchment area is close to the night-clubs, residents in Morcellement De Chazal and Safeland live in a perpetual state of unrest as a result of misconduct, violence and noise, arising from alcohol abuse.

	Noise pollution is a great concern for the inhabitants of the catchment area: a nuisance that bothers them mainly during weekends/holidays with visitors parking their vehicles along the road in the residential area with the sound system volume at alarming level after midnight. 'Outsiders' and visitors under the influence of alcohol misconduct, driving fast; very often on Sundays some young people would resort to motorcycle rally at night in the residential area.
	The presence of visitors and seasonal guests hiring bungalows/ flats in the catchment area represents also a nuisance during weekends and holidays. They would actually after their stay, get rid of their wastes by dumping them on bare land spots. Cleanliness of the residential area should be addressed, for instance making provision for litter bins.
	The residents have expressed their frustration towards those who continuously rent their property to such visiting guests and tourists and suggested that the MRA should audit into that business.
	In view of the FEFLR development project adjacent to their residence, the inhabitants have expressed their concern that this road could add to their already existing troubles. However, they unanimously supported an alternative road for Flic en Flac. Critical issues of concern relative to traffic, security, pollution and the value depreciation of their property have been raised during focus group discussions.
	During the FGD's, other alternatives to the proposed FEFLR (as defined by the identified alignment) were suggested by the Forces Vives of Flic-en-Flac VCA and the Morcellements De Chazal and Safeland. These are: (i) Their preference to Connectivity Option 3 compared with Connectivity Options 1 & 2 (Section 3.9 refers). (ii) The consideration of connecting the end of the FEF Coast road to Tamarin in the vicinity of the Tamarina IRS project premises; this stretch, they said, is not very long and would cost much less than the proposed FEFLR. Note: <i>It is hereby suggested that this alternative should be given serious thought by the RDA, possibly at a later date; but it is outside the scope of this present report.</i>

	(iii) The consideration of constructing the link road along the existing track within the Chassée Maroussem which presently links the FEF Coast road to the Black River Road A3. Note: <i>It is hereby suggested that this alternative should be given serious thought by the RDA; but it is outside the scope of this present report.</i>
Health & Road Safety	The new link road as proposed in the meeting with the Forces Vives Flic en Flac, has been questioned on road safety issues, the potential risk of accident with heavy flow of traffic in addition to the stress caused. The study team re-assured them that these environmental impacts would be duly addressed during the design of the infrastructure.

7.15 PRESENTATION OF FINDINGS OF SOCIAL NEEDS ANALYSIS

The Table 7.6 below summarizes all the social needs identified during the course of the fieldwork carried out within the scope of the SIA Study for the proposed FEFLR.

Note: *This table summarizes identified social needs and does not constitute proposals for meeting social needs.*

Table 7.6: Summary of SNA

Field	Social Need	Responsible Agency / Remarks
Leisure and Recreational activity for the core and outer catchment areas	Provision for a children's playground. Provision for benches on the public beach	BRDC
Services	Provision of bank	The inhabitants of the 'village' are more concerned. They have to travel by bus to go to Bambous or Cascavelle. The residents, all car owners from the study area, usually travel to Cascavelle or elsewhere for any bank transactions. BRDC to approach the commercial banks

	Better control of quality service in the Pasadena Spar supermarket; according to them, the price is relatively high (targeting tourists) compared to other places. The display is quite poor and there is a lack of variety of products.	Relevant Authority or Ministry should monitor prices in this touristic area.
Road safety	Solve the problem relative to private buses slowing down causing traffic and risk of accident at the traffic light (before the Police Station).	This falls under the responsibility of the relevant transport Authorities such as the TMRSU and the BRDC
	During religious festivities or big events organized in Flic en Flac, there is an urgent need for the BRDC to provide solutions for the decongestion of the traffic and the associated parking problem in the catchment area. A whole traffic and parking management system is a priority need in Flic en Flac.	This falls under the responsibility of the relevant transport Authorities – such as the TMRSU and BRDC The proposed FEFLR will alleviate the congestion problem to an appreciable extent. RDA will do the needful
Road Safety	For security purposes a speed breaker installed in the vicinity of Pearle Beach hotel, would reduce risk of accident	To be addressed by TMRSU or the BRDC or the RDA.
Health & Road Safety	Because the region's topography (practically at sea water level) and the associated inconveniences and environmental hazards caused by surface run-off and accumulation of water, potential risks of accidents exist; health and safety of inhabitants and the public in general are potentially at risk. It is urgent that the Morcellements De Chazal and Safeland be provided with an adequate drainage network. Cleaning of the natural water course running through the hunting ground of Société de	Black River District Council BRDC in consultation with Société de Marco Either BRDC or RDA through the FEFLR project TMRSU BRDC, RDA, TMRSU

	Marco is a priority. Provision of footpath and hand-rails. Overcrowding and congestion during weekends/public holidays or festive periods. During events buses are parked in the residential roads.	BRDC, TMRSU
Environment	Provision of litter bins. This measure will reduce the wastes accumulated in the environment and which inevitably flow in the river.	Ministry of Environment/ Black River District Council
	Enforcement of law and order in the action to create awareness, to promote prevention or, penalty for noise nuisance.	Police Force
	Provision of more street - lighting.	This falls under the relevant Authority (Black River District Council)
	Hotels' clients travelling to different spots have to spend about ½ hour or more to go to Tamarina Golf or Le Paradis. The hotels' proposal to have a direct link road to Tamarin would be economically, socially and environmentally beneficial to all concerned.	RDA BRDC Private Land Owners (MSE)
Development Planning	Supervision and close monitoring of construction of new houses; building regulations are not respected. Allocation of commercial licenses needs to be conducted on a fair basis.	This falls under the relevant Authority (Black River District Council)
Prevalence of Social Ills	Enforcement of law and order during weekends and holidays.	Police Forces, in consultation with the FEF Forces Vives, and the Police de L'Environnement

7.16 SOCIAL DEVELOPMENT PLAN

The SDP will act as the backbone to the implementation of projects aimed at improving the livelihood and security of the targeted community, to achieve real-life integration of the proposed road project with the livelihood of the target village i.e. the Flic-En-Flac village or at least the portion of it directly affected by the project, namely the Morcellement Safeland and Morcellement De Chazal, “the core catchment area”.

Based on the findings of the SCP, and the SNA process, the next step in the SIA process is to develop the Social Development Plan (SDP).

The SDP is essentially an Action Plan which is suggested and recommended to be implemented within the ambit of a defined and given project in order to translate in the reality all the social and socio-economic aspects of the SNA, should the project be implemented.

The SDP is in actual practice a summary of the SNA and the associated proposals, but additionally providing in essence the cost estimates of the identified solutions and the social and socio-economic mitigation measures.

The following Table 7.7 summarizes all the proposed social and socio-economic initiatives and details their cost.

Note:

- (i) *The scope and extent of the proposed works have been identified through the SCP and the investigations carried out on site within the catchment areas and the project corridor.*
- (ii) *The works which have been selected are only tentative and indicative at this point in the project procurement cycle and will have to be re-confirmed (and/or modified as the case may be) during the design stage.*

Table 7.7: Cost Estimate of Social and Socio-Economic Initiatives

Details	Working Calculations of Cost Estimates	Estimated Item Cost Rs (Million)
1. Drainage network within Morcellements De Chazal and Safeland, including Avenue Carrière (1.0km), Avenue Kestrel (0.8km), Avenue Crécerelles (0.5km) and other parts (SAY 1.7km)	Estimated: 4km of 700 x 700 drains x Rs7000/m = Rs28,000,000	28.0
2. Construction of footpaths along Ave. Crécerelles, Ave Kestrel, and Ave Carrière + few others within Morcellement De Chazal and Safeland	4km of footpath x 1.2m wide = 4800m ² x Rs2000/m ² = Rs9,600,000	9.6
3. Handrails on both sides of above-listed roads	4km x 2 = 8km x Rs3000/metre = Rs24,000,000	24.0

4. Miscellaneous Works: 5. Speed Breaker on FEF Coast Road near Pearle Beach Hotel 6. Repair of damaged directional Traffic Sign near Pearle Beach Hotel	Budgeted around :Rs100,000	0.1
7. Street Lighting along above-listed roads	Estimated 130No octagonal metallic poles + brackets + bulbs 130 x Rs55,000 = Rs7,150,000, Associated cabling works 4km x Rs600/m Rs2,400, 000	9.6
8. Provision of litter bins along the above roads (supply & fix)	Estimated 80No x Rs3800/Unit = Rs304,000	0.3
9. Construction of catchpits for storm-water runoff as part of drainage network along Avenue Carrière.	4No x Rs1.0m = Rs4.0m Connecting drains to Hunting ground: 4No x Rs0.2m = Rs0.8m	4.8
10. Cleaning of rubbish in natural water course crossing Morcellement Safeland	Item budgeted at Rs0.3m	0.3
11. Re-surfacing of Avenue des Crècerelles (50mm PAC)	490m x 6m = 2940m ² x Rs600m ² = Rs1,764,000	1.8
12. Upgrading of Xavier Worship Place	Construction of slip lane: budgeted Rs5.0m Fencing of the grotto: Rs0.2m Installation of lighting : Rs0.2m Fixing of Notice Board + Miscellaneous Works Items: Rs0.2.	5.6
13. Provision (supply & fix) of litter bins and benches within Public beach	Estimated 50 bins x Rs3800unit = Rs190,000 Estimated 50 benches Rs6000/unit= Rs300,000	0.5
14. Children's playground in the residential area	Estimated budget all-inclusive) Land, fencing, play equipment, installation) Rs400,000	0.4
15. A traffic management system	To be put in place by relevant Authority Budget allowed for administrative task and planning	1.0

16. Parking management system	To be put in place by relevant Authority Budget allowed for administrative tasks and planning	1.0
17. Re-alignment of masonry boundary wall of La Pirogue Hotel	Estimated Rs 1.0 Million	
18. Total		103 m
19. Allow for 20% contingency / estimate margin		21
GRAND TOTAL		124 Million

7.17 ANALYSIS OF SOCIAL IMPACTS

The SIA is therefore the logical continuation of the Social Needs Analysis and will cover the methods and procedures which will be recommended to the RDA, the project owner, and his technical team in order to implement in a sustainable manner moreover acceptable to all the stakeholders the development plan within the ambit of the overall road project.

There are various types of impacts likely to occur as a result of a development project: economic, social, psychological, infrastructural and environmental impacts. Each of the listed categories of inputs is discussed in Sections 7.18 to 7.21 below.

Social impacts can occur at any stage of project development – during project planning, construction and operation. There are positive and negative impacts. With regards to negative impacts, remedial/ mitigative actions are proposed.

Social impacts have been measured with respect to: (i) the probability and (ii) the intensity of such social impacts.

Throughout the social impact assessment, the **probability** of impacts has been measured with respect to the following scale:

- Very high probability
- High probability
- Moderate probability
- Low probability
- Very low probability

Social impacts are classified according to their magnitude, indicating the degree of severity of the impact.

In the context of this SIA report, **the intensity** of impacts has been classified as follows:

- Very high intensity
- High intensity
- Moderate intensity
- Low intensity
- Very Low intensity

When analysing the intensity of a social impact, the following should be considered:

- Moderate intensity – this impact is reasonably significant and requires corrective measures. In this respect, moderate impacts can either be avoided or mitigated.
- Very high/ high intensity – these impacts need immediate action. However, high/very high intensity impacts are very unlikely to be solved through avoidance or mitigation.

7.18 PSYCHOLOGICAL IMPACTS

Psychological impacts are impacts having the potential to affect the human mind and alter perception.

Table 7-8: Distrust and fear regarding the proposed site location for a link road

Psychological Impact	Distrust and fear regarding the proposed site location for a link road
Rationale	Although the inhabitants were all agreeable about the proposal for an alternative road for Flic en Flac, they have expressed their distrust and fear with regards to the traffic flow passing through their residential area. Their distrust was based on the opinion that the promoter was initiating a project to cater for new development plan carried out by Medine Sugar Estate and therefore was not addressing the real traffic problem existent in Flic en Flac since too long. According to them, the proposed link road adjacent to their houses will add up to the existing problems they are already facing in the same area (as described in the preceding sections and sub-sections) and will undoubtedly undermine their living environment. The proposal for a link road will increase traffic and represent potential risks (during heavy rains, the existing Avenue Carrière is seriously flooded). They feared a deterioration of their living surrounding.
Nature	Negative impact
Most Impacted Group	Inhabitants of the catchment area, and specially those of Avenue Carrière.
Stage	This distrust and fear occur mainly at project planning stage
Probability of Impact occurring	High
Intensity	Moderate
Remedial action	Communication and proposal of Connectivity Option 3 (through the Chassée)

7.19 SOCIAL IMPACTS

Social impacts are impacts having the potential to affect society in general.

Table 7-9: The residential area runs the risk of losing its intrinsic identity and value

Social Impact	The residential area runs the risk of losing its intrinsic identity and value.
Rationale	The residents explained their efforts and hard work to invest in the acquisition of their properties. In their opinion, their living place has downgraded and has become 'a <i>public place</i> '. –where a public road corridor will be sited.
Nature	Negative impact
Most Impacted Group	Inhabitants of the catchment area – specially the Morcellements Safeland and De Chazal
Stage	Occurs during operational stage and beyond
Probability of Impact occurring	High
Intensity	Moderate
Remedial action	Proposal of another option road e.g. the Connectivity Option 3 or the Wolmar-Tamarin Connection or the Clarence Connection (from Domaine de Wolmar entrance to the Black River A3 Road.

Table 7-10: The Prevalence of Social Ills

Social Impact	The prevalence of social ills occurring within the catchment area caused by night life in that tourist spot.
Rationale	Feeling of frustration and despair with respect to social ills occurring in the vicinity. High alcohol consumption frequently results into alcohol-related incidents like violence and misconduct. They portrayed a negative image of their residence place. The proposed site for new road will increase the number of visitors and traffic, thus, intensifying social ills in the vicinity.
Nature	Negative
Most Impacted Group	Residents of the catchment area, specially the Morcellement De Chazal

Stage	Operation
Probability of Impact occurring	High
Intensity	Moderate
Remedial action	Awareness campaign, promoting prevention and enforcement of law and order. Involvement and working in close collaboration with the business operators (Bars, clubs and restaurants).

7.20 INFRASTRUCTURAL IMPACTS

Infrastructural impacts are impacts having the potential to alter man-made environment.

Table 7-11: Provision of a link road

Infrastructural Impact	Provision of a link road
Rationale	In terms of traffic decongestion, a new road is most welcome
Nature	Positive
Most impacted Group	Resident population of Flic en Flac, economic operators (hotels, businesses etc), visitors and the public in general
Stage	Operation
Probability of impact occurring	High
Intensity	High
Reason	Up till now only one entry/exit route exists; if and when any event, accident or religious ceremony happens in Flic en Flac, a situation of chaos totally blocks the traffic flow. There is no other way out.

Table 7-12: Provision for proper drains and cleaning of natural watercourse

Infrastructural Impact	Provision for proper drains, and cleaning of natural watercourse.
Rationale	Lack of proper drains, bad state of existing drains, blockage of watercourse by rubbish. Surface run-off has caused material damage to many households and represents health and security risks.
Nature	Positive
Most impacted Group	Residents of catchment area, specially along Avenue Carrière

Stage	Operation
Probability of impact occurring	High
Intensity	High
Remedial Action	Through the provision of an effective purposely-designed catchment and road drainage network, prevent flooding and damage of belongings during heavy rains. Reduce the vulnerability and psychological stress of inhabitants.

Table 7-13: Provision of footpath and handrails and street lights

Infrastructural Impact	Provision of footpath and handrails and street lights
Rationale	No footpath and handrails specially in Avenue Carrière, Avenue Kestrel and Avenue des Crécerelles.
Nature	Positive
Most impacted Group	Residents of catchment area and public in general
Stage	Operation
Probability of impact occurring	Moderate
Intensity	Moderate
Reason	Provision of footpath and handrails along the proposed roads will then render the roads safe enough for the flow of traffic expected

7.21 ENVIRONMENTAL IMPACTS

Environmental impacts are impacts having the potential to affect the natural environment.

Table 7-14: Increase in road traffic

Environmental Impact	Increase in road traffic
Rationale	New road will lead to an increased level of road traffic, especially during peak hours (weekends, holidays or festive periods). This may in turn lead to a higher potential for road accidents
Nature	Negative
Most Impacted Group	Inhabitants of the catchment area, especially motor vehicles owners and those living along main roads
Stage	Construction and operation
Probability of impact occurring	High
Intensity	High
Remedial action	A whole traffic management system – aimed at rationalizing traffic flow within the whole FEF Village and the catchment area of Morcellement Safeland and Morcellement De Chazal.

Table 7-15: Increased noise pollution

Environmental Impact	Increased noise pollution
Rationale	Excessive noise pollution may lead to social dissatisfaction and unrest.
Nature	Negative
Most Impacted Group	Residents of catchment area – specially along the local connectivity roads
Stage	Operation
Probability of impact occurring	High
Intensity	Moderate
Remedial action	Install a buffer zone – specially along the southern boundary of Morcellement Safeland.

Table 7-16: Provision for litter bins

Environmental Impact	Provision for litter bins
Rationale	Lack of litter bins in the catchment area; as mentioned earlier the frequency of seasonal guests, visitors during weekends and holidays and at night increases the problem of solid waste proliferation
Nature	Positive
Most Impacted Group	Public in general and residents of catchment area
Stage	Operation
Probability of impact occurring	High
Intensity	High
Reason	Keep cleanliness of the residential area and the drains

7.22 SHORTFALL IN INCOME FROM SUGAR

As indicated at sub-section 6.7.1 of Chapter 6, a land loss of 35 Ha of sugarcane is predicted.

Assuming a yearly yield of cane of 70 tonnes per Arpent, a sugar extraction rate of 10% and a sugar price of Rs15, 000 per tonne on the world market, the shortfall in sugar income is calculated as given below:

- Cultivation area = 35Ha = 82.95 SAY 83 Arpents
- Total sugarcane yield = 83 x 70 = 5810 tonnes SAY
- Sugar extraction: 10% of 5810 tonnes = 581 tonnes
- Shortfall in revenue: 581 x Rs15, 000 = Rs8,715,000 SAY Rs10.0 million (allowing for 10% margin)

Such a figure is considered to be relatively small and moreover negligible when compared with the overall sugar revenue for the whole island.

Hence it can be considered that the loss of productive soil resulting in an accompanying shortfall in sugar revenues is not consequential – which pleads in favour of the proposed project of the FEFLR.

7.23 SOCIAL CONTRIBUTION TO XAVIER WORSHIP PLACE

The proposed FEFLR project can act as an opportunity for a social contribution to the Xavier worship place. As explained at sub-section 3.3.4.3 in Chapter 3, a social contribution budget can be worked out towards the upgrading of the grotto (and the prayer and worship place) for the benefit of the Christian devotees and the tourists at large.

The Social Development Plan described at Section 7.16 above has provided the budget and its breakdown for the upgrading of the Xavier worship place.

7.24 LOSS OF INCOME TO HOTELS

During the social survey carried out within the residential community and the hotel community, the 2012 Flic-en-Flac Carnaval Event was constantly brought up by the residents of Flic-en-Flac, during which the traffic within the whole Flic-en-Flac village had practically come to a standstill.

The hotels further brought up the fact that on the Carnaval day, many of their tourist clients who got blocked along the way missed their flights – having had to find alternative access through the hunting ground of Société de Marco, also known as the “*Chassée de Maroussem*”.

The hotels further reminded the survey team that during the stay of the Honourable President of China at Hilton Hotel in 2013, traffic along and the use of the only available Flic-en-Flac Road had been severely restricted – causing inconvenience and disturbance to the scheduled flow of tourists and personnel attending or leaving work to start or after finishing their work shifts.

The hotels accordingly suffered a loss of revenue because the tourists who missed their flights had to be offered additional accommodation for one or several nights free of charge – because it was the responsibility of the hotels to take them in time to the airport.

Such compensation can reach to quite appreciable monetary amounts depending on the number of tourists who missed their flights and the accommodation rate of the hotels in question.

The construction of the FEFLR will provide alternative access and will therefore eliminate this socio-economic risk.

7.25 IMPACT OF FLIC EN FLAC LINK ROAD PROJECT

Impact of an alternative access road to FEF through the construction of the FEFLR is unanimously judged to be greatly positive. The resident population of Flic en Flac, the tourist operators: hotels (positive for both the employees and the guests), taxis, businesses and the public in general would highly benefit from that alternative access to Flic en Flac.

However, various opinions from different groups have shown their concern with regards to the proposal site location for this project, and specially about the local connectivity options.

Individual interviews conducted with 9 major hotels located in the tourist area have revealed that the development of a new link road to Flic en Flac would undoubtedly impact positively on their activities.

According to interviewees, hotels would largely benefit from the link Road project in terms of savings in fuel costs, time, stress-free travel to the work place, and security aspects.

It was reported that hotels' clients were stuck in the dense traffic caused by the Tourist Carnaval held in 2012 and the Société de Marco gave access across its hunting ground (Chassée Wolmar) to the hotels for the transport of their guests to the airport. Nevertheless many of them missed their flights and had to stay overnight at the charge of the hotels.

During periods of religious festivities, event like Carnaval, the hotels are very affected by the traffic congestion and the parking situation along the Coastal road and the lateral roads too.

A whole traffic management system needs to be examined and put into place.

The proposed FEFLR is also in a position of providing an opportunity for a social contribution to the upgrading of the Xavier grotto and its worship and prayer place for the benefit of the Christian community and the touristic visitors.

Access of clients and tourists to their hotels should not be obstructed or constrained, according to the hotels' management; this situation can only create a negative image of the island as a hectic and stressful destination; moreover, unreasonable time spent in traffic is not economically sustainable for the tourist industry.

The proposal of an alternative access to Flic en Flac is also perceived as a flexibility of access to and from FEF in case of any disturbance, a tsunami, or major road accident.

Prevalence of social ills is external to the residential area. This issue is linked more with the pattern of overall development and change in attitudes, values and behaviours.

The motivation of inhabitants to preserve the natural beauty of their living environment, specially those living on the fringe of the Chassée was evident.

Main negative impacts have been described in the preceding sections and sub-sections (see specially Section 7.14 "*Summary of Research Findings*" with regard to the dense traffic flow, parking situation, road infrastructure, noise and air pollution, risk of accident, loss of property value.

However, remedial actions and mitigations measures have been spelt out which should imperatively be taken into consideration during the design and implementation of the Flic-en-Flac Link Road project - with the view of making it an environmentally and technically sustainable project in the future