THE BEACH IS MINE
Sand mining in the Community of Piaye, St. Lucia


“THE BEACH IS MINE”
Sand mining in the Community of Piaye
St. Lucia

The Socio-economic Impact of Sand mining in the Piaye Community.

A. Summary

Sand Mining in the community of Piaye on the southwestern coast of St. Lucia has been an integral part of the socio-economic life of the people for the past twenty-five years. The demand for sand has grown tremendously over the past decades with increased production by the community. During this period, sand has been extracted manually by families, and the community has successfully resisted the use of mechanical loaders to extract and load sand. An end to sand mining will result in the loss of income for a few families, as many have secured alternative sources of income. The community perceives the beach sand in particular and the natural resources of the community as belonging to them for their benefit. With the end to beach sand mining, river mining is seen as an alternative. In addition any other initiative for income generation must keep the older miners in the community. This is the only way they can fully benefit from the small incomes out of jobs requiring unskilled labour. The long-term solution is to develop programmes for the use of the beach and river as well as a programme in craft training and development.

B. Background.

The Community. The community of Piaye is located on the southwestern coast of the island of St. Lucia lying between the village of Laborie and the community of Rivière Doree. This squatter community is tucked between the estates of Balenbouche (Choiseul) and Sapphire (Laborie). Traditionally the residents of the community were employed as laborers on the neighbouring agricultural estates of Balenbouche, Park, and Sapphire. The main crops were sugar, cotton, and root crops. Some of the men in the community also worked on estates in Mahaut (Micoud), Millet and Roseau, returning to the community every fortnight or monthly to visit their families with remittances of one sort or another. Most of the families were involved in subsistence farming and small-scale livestock production. When the neighbouring estates ceased production, the majority of families turned to sand
Map showing location of the Piaye community

mining, as an alternative source of employment. There are still small pockets of subsistence farming. Fishing was another form of employment, but has become non-existent. When the older fishermen stopped fishing the young persons did not replace them. The younger men thought it was dangerous to continue fishing with the traditional canoes, and without modern equipment. The assembly plants and factories located in Vieux Fort provided some employment for the women in particular, but this has always been short lived.

The physical appearance of the community changed from a predominance of wooden and thatched roof houses, to concrete structures following the passage of Hurricane Allen in 1979, when most of the houses were destroyed. Since then small heaps of sand have become a permanent fixture near houses as the residents continue to renovate and add on to existing structures.

Sand mining. The extraction of sand from the Piaye beach started about twenty five years ago. Only the families "below the hill" or close to the sea were involved. Later, as the activity became more lucrative, and people stopped working on the neighbouring estates, other individuals and families from "up the hill" became involved. Lots or the locations for piling the sand were acquired on a "first come-first serve" basis and were retained by families, and used by subsequent generations. The mining has always been done manually with the use of shovels and buckets and later on wheelbarrows. The miners have always resisted the use of heavy equipment in the extraction of sand. Two occasions when individuals from outside the community used mechanical loaders ended in protest and also arrest of the offenders.

While the sand mining started on the initiative of the community, two parliamentary representatives for the area had opposite views on the practice. In the
first instance Joseph M. D Bousquet gave “permission” for the community to extract sand. However another district representative, Rufus Bousquet opposed mining and attempted to put controls on the activity. Until recently sand mining was a family activity where children were involved in carrying sand outside of school hours. Today some individuals manage lots, which they acquired from other family members.

A dwelling house near the beach.

C. Main Areas of investigation:

Against the background described above, the Natural Resources Management Unit of the OECS Secretariat undertook an investigation of sand mining in the community of Piaye. This investigation was also brought about by the difficulties experienced by the Unit in designing public awareness campaigns, on the impact of beach sand mining. It was felt that there was not sufficient knowledge of the characteristics and behaviour of sand miners, some of which may require changing if the sand mining issue was to be amicably resolved. The study of sand mining and sand miners in the community of Piaye is an attempt at understanding the social and cultural importance of sand mining. The investigation sought to assess:

1. The socio-economic impact of sand mining on the community.
2. The impact of sand mining on the coast and coastal resources.
3. The alternatives to sand mining as a source of income.

D. Terms of Reference:
The following terms of reference were used in the conduct of the study:

i. Identify the sources, processes, methods and rate of extraction in relation to sand mining in the community and the nature of supply.

ii. Identify the demand levels, distribution by users, purchasers and destination of sand extracted from the Piaye beach.

iii. Determine the environmental impact of sand mining such as land loss, beach retreat, exposure of the community to storm driven waves, and flooding.

iv. Identify the social organisation of sand mining, its cultural impact, and contribution to the socio-economic and political life, as well as profiles of the persons involved in the sand mining.

v. Determine the past and current uses of the beach and other natural resources of the community.

vi. Identify the general patterns of community participation in decision making on resource use in general and on sand mining in particular.

vii. Identify the perceptions of the community of sand mining and natural resources management, their levels of knowledge of the issues and information needs in relation to these issues.

E. METHODS OF INVESTIGATION.

The following methods of investigation were used to undertake the study.

1. Collection of primary data through face to face interviews with randomly selected members of the community

2. Collection of secondary data

3. Review of secondary data on the areas of investigation.

4. Non-participant observation.
The data was collected during the two site visits on 8th and 9th July 1999, with additional data collected via telephone interviews with individuals from the community. Two meetings were held in the community. Thirty persons attended the first meeting, which was held at the beach on day one of the field visits. The discussion was dominated by persons who were in support of sand mining. The meeting lasted approximately two hours. Participation may have been affected by the presence of the police in the community. Following discussions with the researcher, the police left the community before the start of the meeting.

On the second day the researcher met with a smaller group of six persons mainly young people who are opposed to sand mining. This meeting was preceded by another incident involving the police. Two young men were arrested on the beach in the morning, minutes before the arrival of the researcher. They were taken to the Laborie police station, charged and released on bail six hours later. Before being released they were taken back to the community and asked by the police to fill two bags of sand, which was then taken to the police station. On that same day it was observed that only thirty percent of the lots had sand. On advice and after several cautions from the police who frequently visited the community during the previous five days, miners sold all their sand and stopped mining. Also on the second day, eight trucks came to the community to purchase sand, but returned empty. In fact one truck which was being loaded when the police arrived at the beach was ordered to dump all the sand, since the driver could not produce a permit from the Ministry of Communications and Works.
Over the two-day period, interviews were held with eight individuals including senior citizens, young and older sand miners and persons who are opposed to sand mining.

A third site visit was held on August 23rd, 1999, when a meeting was held with a representative of a group, which had submitted a petition to the Prime Minister (dated August 06 1999, and signed by twenty-five persons). The informant stated that most of the young men and two of the women who were actively involved in mining had secured alternative employment outside of the community. Eight sand miners had moved to the river to mine sand. There were two sand piles near the beach, both of which had been there for the past six weeks. Many community members confirmed that there had not been any sand mining for over six weeks. A community project involving the construction of drains was using sand purchased from Riviere Doree Resources Management Organisation. There was significant accretion on the beach. The main area of the beach had heavy deposits of sand with a height of five feet above the river flow, at the highest point. The sand also built up between the reef and the coastline on the eastern end of the beach. The average width of the beach was twenty-seven feet. Apart from the natural and man made waste, which littered the beach, the Piaye beach can be considered to be in excellent condition.

F. Findings.

1. **Extraction of Sand**: Sand is removed from the beach manually. The sand is piled on the beach near the area, which is dug. Where the sand is wet either from recent wave action or rain, the heap/pile is allowed to drain for a short while. Usually not more than two people are involved in digging and piling. The next stage is the heading of the sand from the beach to the allotted piles, which belong to the different families. The sand is carried in open basins of approximately five-gallon capacity. Children carry sand in smaller basins. Plastic and galvanized buckets are also used. However the open basins are preferred for ease of loading and unloading. As many as ten persons (including children) from one family may be heading sand at the same time. The main heaps of sand are very near the beach, the furthest being about twenty yards from the beach. The miners
A sandlot barricaded with old galvanized roof sheets

acquired the lots or areas where sand is heaped on a first come first serve basis when sand mining started in the early seventies. Families have retained the same lots over the years, and children continue to use the same lots when the parents retire from sand mining due to old age. The lots are separated and barricaded with discarded galvanized sheets, driftwood and coconut branches. The lots are not organised and reflect the same general patterns of squatting in the community. They have encroached onto the road sometimes making loading of large trucks difficult. In addition this situation has meant that only those families with heaps near the road or turning points for the large trucks sell sand frequently. In recent times the younger miners have heaped sand “temporarily” near the road and thus sell at a higher rate than the women, the traditional sand miners in the community. At the time of the research there were twenty-five lots for sand piles. With the exception of three cases there are no multiple owners. Approximately two hundred (200) people are actively involved in sand mining. It is estimated that an additional fifty children below the age of thirteen are involved at one time or another in the production of sand.

2. Changes to the Beach and Coastline. The senior members of the community stated that the coastline had receded due to erosion and there was a significant loss of beach. This was illustrated by the fact that many years ago, members of the community could walk on the beach to get to the neighbouring communities of Laborie and Riviere Doree. At the time of the research it was not possible to go beyond the stretch of the beach due to coastal erosion which resulted in the loss of beach.

A comparison of aerial photographs of the Piaye beach in 1941, 1966, 1977 and 1992 revealed little change in the beach width. The 1992 photo revealed the greatest accumulation of sand compared to all other photographs with accretion on both sides of the river.
According to a survey by Suzanna DeBauville Scott of the Fisheries Department, in 1996 the Piaye beach was 297 meters long with an estimated sandy area of 4810 square meters. The report further noted “low-lying cliff bordered the beach in the north and a river flows in the middle of the beach”. Video footage and still photographs of the beach between 1986 and 1999 indicated progressive erosion of the coastline, but varying levels of accumulation of sand.

![Erosion of the coastline near the Piaye beach](image)

3. **Community Participation**: Participation in the development of the community by residents, has been very poor, and in the main absent. However, some members of the community have come together for the planning and execution of specific activities and events, particularly cultural events. There are sports clubs whose sole functions are to organise their teams to participate in district competitions. The Piaye Cultural groups which has made the community known nationally and regionally, focuses on the promotion of cultural expression. An informal group of individuals referred to as the Development Committee has been meeting to initiate activities such as solid waste management programmes, beautification of the community and general sanitation including the cleaning of the beach. While the Committee has discussed the issue of sand mining, no definitive action or solutions have been proposed.
Prior to the investigation by the OECS NRMU, there has not been any general community meetings to discuss sand mining, its impacts and alternative means of income generation. It was notable that in the late 1960s, the late Joseph M D Bousquet, parliamentary representative for the community was reported to have met with the community and given them permission to continue sand mining, as a means of economic survival. No documentation is available to verify this decision or the exact details of the arrangement. Another parliamentary representative Rufus Bousquet, the son of JMD Bousquet, attempted to curtail sand mining.

4. **Demand, Supply and Price.** Traditionally miners in Piaye responded to requests for sand from truckers and building contractors from the neighbouring communities of Laborie, Choiseul, Vieux Fort and Soufriere. Sand miners have small heaps to secure and mark their lots. This would be topped up when the requests were made verbally, directly to the miner. In some cases the purchasers would pay in advance. During the past ten years, miners have prepared heaps in anticipation of requests from purchasers. This practice resulted from the greater demand for sand, which accompanied the construction boom in the island. Demand continued to be very high with as many as ten trucks per day coming into the community at peak times. The price for sand is not determined by any measurement. Instead the concept of a small truck (3cu. yds), a medium sized truck (6-8 cu. yds) and a large truck (10 cu. yds), is used. The sale price for the small truck is in the range of EC$120.00 – EC$150.00; the medium sized truck is in the range of $200.00 - $250.00, and the large truck in the range of $400.00 - $450.00. In spite of the established ranges, all prices are negotiable. There have been many instances in recent times where the younger sand miners have sold heaps for fifty to sixty percent of the quoted price range. The majority of the community has condemned this practice.

![Loading sand onto a small truck](image-url)
5. **Income Generation and Economic Impact.** At peak times some miners can receive gross earnings of EC$1500.00 per week from the sale to trucks of varying sizes. Where a group of three or four individuals are involved, they also load the sand on the trucks. All the cash is retained by the group. Where assistance is required for loading, particularly in cases where sand is sold by women, $40.00 - $50.00 is paid to two young men to shovel sand in the trucks. Above all it is estimated that an average of eight truckers purchase sand daily with a total load of about forty cu. yds. The total earning per week for the community from sand is about EC$9600.00. But this is not evenly distributed, as the younger miners enter into “arrangements” with truckers at the main road before they get to the beach. This income from mining is integrally tied into the local economy. In addition to purchasing basic needs with cash, many miners particularly women take credit from the local grocery shops on the future income from sand. All the older miners stated that “they sent their children to school on money from sand.”

6. **Perceptions of Natural Resources Management.** There is the prevailing view that sand is in abundance on the beach and mining is an essential part of natural resources management. It is believed that the sand comes down with the river particularly during heavy rains. It all goes into the sea, where it is washed and sent back onto the beach through wave action. With the constant flow of the river and the complementary wave action, sand continues to pile up on the beach. If there were no mining the sand would pile up to a level which would impede the free flow of the river into the sea and also restrict the use of the beach for recreation. It was also noted that with the existence of a high beach or sand dune, impeding the free flow into the river, the families who live in the low-lying areas near the sea will be at greater risk of being flooded out when the river swells. Community members believe that recent filling of the river beds is due to excess sand which could not get down to the sea because of the absence of heavy river flows. There was therefore justification for river sand mining to allow the river to flow freely. While some persons believed that the erosion of the coast and the alteration of the beach front in general was the result of extensive sand mining over the past three decades, others were of the view that the construction of the pier and general construction of the docks in Vieux Fort changed wave direction which led to erosion of Piaye and adjacent beaches.
7. New Sources of Employment. The members of the community have recognised the limited options for employment and income generation within the community and are willing to accept employment in which their skills/labour can be utilised. They made the following recommendations:

(i) The establishment of a craft workshop for young people where skills in the construction, and arts and crafts will be taught.

(ii) The construction of a resort near the beach, after relocation of the residents from this area. This would create jobs for the people in the community.

(iii) The provision of boats and supplies on concessionary terms to allow those persons with an interest and experience in fishing to explore this option.

(iv) Regular cleaning of the beach and the creation of small scale services especially food and beverages to persons and groups using the beach.

(v) The provision of jobs in factories and other “production” areas. It is recommended that the Parliamentary representative assist in that process.

(vi) The formation of an Association of Sand Miners in Piaye to implement some sort of management plan which will ensure price standardisation, equal distribution of sales opportunities, and the orderly mining of sand, particularly river sand mining which is likely to go out of control as the miners attempt to replace their lost income.

8. General Community Concerns. The members of the community are generally concerned that the ban on commercial sand mining will also curtail the use of sand for private use, particularly in the extension of their homes. The absence of
cash particularly prior to the commencement of the school term will also cause further difficulty for parents. There are no systems for the management of solid, liquid and human waste. This is a major concern for the community. Previous efforts to solve the community problems have not succeeded because there is a perception that the community is not united.

G. Assessment.

Sand mining is an integral part of the social and economic life of the community of Piaye. It has allowed the members of the community to remain at home and benefit financially from a resource which they perceive to be theirs and also renewable. It is similar to a cash crop where returns are immediate.

The advent of electricity and the access to television, radio and telephones have introduced activities which occupy peoples time, most of which was devoted to sand mining and some subsistence agriculture. However the income from sand mining cannot be immediately replaced by any another activities in the short term, due largely to the unavailability of skills in the community. In fact that most people are not inclined to leave the community for long periods to work outside. It must be noted however, that with the exception of one or two women with families, every other individual involved in sand mining have options for income generation through employment in factories or the construction sector. If fact most of them have exercised this option. This was evident when the mining was stopped in July 1999.

The cessation of sand mining particularly on the beach will have long term benefits to the community, as long as alternative viable employment is secured for the women, many of whom are single parents. The Piaye beach, in spite of all the coastal erosion remains a very attractive beach for recreation in general, with options for surfing during times of heavy swells. The approach to stopping or managing sand mining has to address the demand. The enforcement of the requirement for a permit to purchase sand is extremely critical.

The organisation of the community into economic enterprises or small businesses will be a long process. This will require a social transformation from doing work “on their own time” and at subsistence levels, to being integrated into the market economy, which necessitate levels of accountability beyond the household.

The current disparities created by the undercutting by the young male sand miners has widened the gap between the young and the old and tensions will get worse as the sand mining and by extension the sale of sand increases. The cessation of mining, with a focus on “new” individual and collective social and economic activities could provide the opportunity for new functional and less tense relationships.

The increased police surveillance and the reduction in demand has created a sense of acceptance of the fact that as far as sand mining is concerned, it will not be business as usual for the community. Sand mining will either be controlled or stopped altogether. It is
important that this attitudinal level becomes the point of departure for developing solutions.

**H. Conclusions and Recommendations.**

There are very few options available for the community with a high level of unemployment and no natural resources except the sand. The low level of marketable skills, and education among the young people in particular has exacerbated the problem of finding immediate and short term solutions to unemployment and the lack of income generating activities. Besides, to the majority of the community, there is nothing else but beach sand mining which is a source of ready income, a social ritual with traditional rights, and a reliable renewable resource. There are four broad approaches to the solution of the problem of sand mining. They are not presented in any order of priority.

i. Continuation of sand mining with a very clear management structure and plan, which involve the community as well as representatives of law enforcement agencies and Ministries of Fisheries and Communications and Works. The main purpose of the plan is to ensure that extraction is sustainable and controlled and that the benefits are distributed equally throughout the community.
ii. Complete ban on sand mining, before the end of the year 1999, and the introduction of a programme to provide short term skills training and employment for the youth and women in the community. This approach will be enhanced by the recent vigorous surveillance by the police and the imposition of penalties on offenders.

iii. Phasing out of sand mining over a period of two years, with the introduction of some type of long-term cottage industry, which will keep the majority of community residents, particularly the women working at home.

iv. The implementation of a public awareness programme on the importance of the limited natural resources or the survival of the community as a social unit. This would involve the use of the Piaye Cultural Group and some information products in the mass media. Previous mass media exposure of the cultural richness of Piaye, and the sand mining issues, both had positive effects on the community.

The recommended option is to put an immediate end to beach sand mining, and allow controlled and limited river sand mining for an extremely short period, by the few persons who do not have options. There must be the understanding by those persons that their activities will be reviewed periodically to avoid further destruction to the river. River sand will be purchased through a permit, to allow for some additional control on the demand side. Income generating activities and assistance to persons who have expressed the interest in fishing, small food outlets and skills training should be explored immediately. In the meantime resources should be provided to ensure that there is regular cleaning of the beach to enhance its aesthetic appeal, and as a place for recreation. In order to enhance the potential of the beach for recreation by locals and visitors alike, the chronic problems of solid, liquid and human waste disposal in the community should be solved. The community has welcomed large numbers of visitors for special occasions such as Piaye Day and Jounen Kweyol (International Creole Day), but not on a regular consistent basis. This is another level of transformation, which must be achieved for the full potential of the community to be realised.

The long-term plan should involve some regular beach monitoring involving the community, with assessment of the accretion and its impact on the beach as well as the river. Public awareness programmes must be implemented at all levels to attempt to change both attitude and practice.

Post Script
On the final visit to the community on August 23rd 1999, there was evidence that no mining had taken place since July 9th 1999. Two of the sand piles, which were there at that time, have been left untouched. Most of the young miners have secured employment outside of the community. There is now a significant accretion of sand on the Piaye beach.

Prepared by
Embert Charles.
September 1999