

# Accounting for the Petro-Dollar Conference

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## Socio-Environmental Impact of Industrial Estate Development

Industrial Estates and Village  
Communities in Trinidad and Tobago:

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*Lessons from Point Lisas*

# Introduction

The aim of this presentation:

- to provide some perspectives on the impact of industrial estates on the environment in village communities.
- To examine lessons that can be applied to other rural areas for which industrial estates are planned.

# Introduction

Point Lisas Industrial Estate was commissioned in late 1970s. It is ~30 years old.

- The adjacent communities have changed.
- Dormitory settlements reside upon former sugar cane fields;
- The sea was pushed back as lands were reclaimed for industrial use;

# Introduction

- Some villages have been transformed from a traditional rural outlook to a more urban outlook.
- **That all of these changes are due to the development of the industrial estate is doubtful.**
- The impact on the physical environment is clearer. Changes to the flora, fauna and physical environments at Point Lisas are being monitored.

# The Approach

A literature review of:

- The Feasibility Assessment for the Point Lisas Industrial Estate (Little, 1967)
- Further socio-economic studies for the expansion of the industrial estate to the north (IMA, 1987)
- An environmental baseline review for the Point Lisas Industrial Estate (IMA, 2001).
- The National Physical Development Plan (1984)
- Various reports from the Central Statistical Office including the results of the 2000 census (CSO, 2002).
- The PLIPDECO website.

# Caution!

Data used extend over a period of 30 years -

- boundaries may have changed making comparisons difficult and inconsistent.
- the various IMA tests have not adopted the same methodologies so that some of the marine chemistry results cannot be compared.
- the limited time to acquire the data required to support the ideas expressed.

# Location of Point Lisas Industrial Estate

- The industrial estate is located in the west central coastal area of Trinidad.
- It covers an area of 900 ha, 750 ha of which is occupied by 85 enterprises.
- The estate stretches from St. Andrews/Couva in the north to Claxton Bay in the south.
- It occupies former Caroni lands, built up areas and reclaimed lands.

# The Paradox in location

- It is paradoxical that industrial estates have all of the needs of an urban area yet they are preferably located amongst rural communities.
- Point Lisas Industrial estate (~5,000 workers) is larger than each of the adjacent villages including:  
St. Andrew (2754), Brickfield (901),
- Felicity (529), Union (1269),
- Carapichaima (3960), California (2716), Dow (3603).



## Need for infrastructure

Adequate infrastructure in power, water and waste disposal are not readily available in rural communities.

- For example at Point Lisas,  
Water supply estimated at 1 million gallons per day in 1968 to increase to 22 million gallons by 1972.
- Electricity is supplied from the Central Substation in St. Mary's Village (12 Megavolt amps), and on the estate from a substation at Powergen (60 Megavolt amps) and from other companies that generate up to 80% of their power needs.

## Outcome

- By 1998 the supply of these utilities was improved to the villages around the estate.
- Debate over whether this improvement was consequent upon the presence of the industrial estate.

## Unavailability of the required specialized labour

- Numerous labourers, semi-skilled and skilled workers are hired during the construction period
- Permanent and higher paying jobs are reserved for the skilled and technically trained worker.
- There were such persons present in the villages in 1968.

## Outcome

- The labour force in the villages at the time of construction was mainly employed in Caroni 1975 Limited or in fishing and semi-skilled jobs.
- 35% of the workers were obliged to travel to the towns to gain off-farm employment (IMA, 1998).

# Indirect employment

- The villagers were able to gain a livelihood in service and restaurant jobs.

# Support for office functions

- There is the necessity to construct a mall to provide some of the support services for office functions.
- Villagers benefit from pay per use of these facilities which saves time and effort to get to the towns.

# Lesson 1

- Industrial estates operate as an enclave which imports its resources to supply its needs in the first instance.
- Over time, the communities are able to invest in educating and training their young so that there is some opportunity to gain quality employment at the plants.
- Services introduced to support the estate help to develop urban places.

## Development of urban environment - Couva

- There was a change in the urban hierarchy between 1960 and 2000 (CSO, 2002). Couva and Chaguanas have advanced in their position relative to other urban centres.



## Urban size and level of business activity in Trinidad, 2000.

Centre	Population	Businesses present
Barrackpore	13,461	345
La Horquetta	13,817	292
San Juan	15,347	835
San Fernando	16,016	3,102
Chaguanas	17,819	2,846
Sangre Grande	18,157	787
Point Fortin	19,056	866
Mayaro/Rio Claro	32,143	948
Arima	32,278	1,464
Siparia	81,917	2,141
Penal/Debe	83,609	2,310
Port of Spain	49,031	5,694
Princes Town	91,947	2,351
Diego Martin	105,720	2,526
San Juan/ Laventille	157,295	4,687
Couva/Tabaquite/Talparo	162,779	4,599
Tunapuna/Piarco	203,975	5,706

Source: CSO, 2002

Electricity and  
telephone are reliable

Increase in supply of  
goods and services

Improvement in  
housing stock

Increased  
property values

Reliable transport  
links

**Couva, 2005**

## Lesson 2

Service type businesses have increased in the Couva region.

The presence of the industries at Point Lisas Couva has contributed to transforming some villages into an urbanized region.

# The Physical Environment in adjacent villages

- **One man's poison is another man's medicine.**

# Environmental, social and emotional disconnect

- Loss of open access and traditional access to the “pay-per-use” that urban residents have accepted.
- The traditional village household was subsidized with food and other resources taken directly from the environment.
- This is seen in the relations to the swamp.
- The swamp provided supplementary food and recreational activities to supplement meager incomes from agriculture.

## Lesson 3

- The location of industrial estates in low population areas physically removes the savings and supplementary resources that boosted the incomes of the rural communities.
- There are added costs incurred to provide for food and entertainment for the household when these resources are removed.

# Environmental alienation

- influx of workers and the willingness to settle
- alienation from the former use of these areas
- In-migrant is detached for which he has no attachment

# Environmental alienation

- Reactions to the alienation from the environment vary among communities, and even among individuals.
- place increased demands on the reduced resources that are left available
- migrate to the towns to gain employment



# Risk of pollution/accidents

- real and perceived risk to health of individuals

# Pollution of the Physical Environment

- **Physical changes**
- **Water quality changes**
- **Biogenic changes**

# Lesson 4

- The need for vigilance is emphasized.
- The natural environment has its cycles which we are still to understand.
- Rapid changes in this environment can alter the equilibrium and cause permanent changes that can adversely affect the flora and fauna and the people that depend on these resources.

# Conclusion



**The good old days were not all good.**



**THANK YOU**



