

# TAR SANDS IN T&T?

A look at the world's dirtiest oil, from  
Canada to Trinidad and Tobago



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 All photographs by Macdonald Stainsby, unless otherwise noted.  
 Back cover by Dru Oja Jay. Printed in Montreal by Katasoho, [katasoho.com](http://katasoho.com).  
 Background photo: Burning tar sands during forest fire, April 2010.



# PREFACE

Canada has an image that in most cases does not match reality. Within the territory of Canada, vast destruction occurs in Alberta and elsewhere, in the name of the tar sands industry. Over time in Trinidad and Tobago, one notices the same image gap in play in the Twin Island nation. Canada, through its largest banks, has held strong imperial designs on T&T since independence. Today many of those banks have made a comeback into Trinidad and Tobago, including the Royal Bank of Canada (RBC).

RBC is already the largest financier of Canadian tar sands operations, which have been nicknamed the “Gigaproject” as a shorthand reference to the sum of the multiple megaprojects planned together. Combined, this is the largest project in human history, and many say the most destructive on the planet. Communities living downstream of tar sands mines and elsewhere have seen unexplained health problems.

The extraction process poisons water with a toxic soup of heavy metals and polycyclic aromatic hydrocarbons. In addition, when you take pipeline and other tar sands infrastructure into account, we are looking at the third fastest rate of deforestation in the world.

Perhaps most immediate to the headlines is that Canada has started to become isolated internationally, other than from the United States of course, due to the climate policies that are a direct result of tar sands extraction. Before Canada withdrew from the Kyoto protocol, the country had seen rates of carbon emissions go up much faster than even the US totals. The federal government doesn’t even bother denying this is directly related to tar sands expansion over the last decade.

There are many parts of both the Canadian story and the plan for a similar industry in Trinidad and Tobago that RBC, Canadian and other energy corporations and corrupt government officials do not want to have told. While it may be fundamental to democracy that populations have a right to know what the risks, costs and possible outcomes of such an industry might be, such information was never made available to people

in Canada before the industry was developed. In Trinidad, bitumen has been mined on a small scale quarry level for pavement, but no conversion to oil on a commercial scale has happened – yet.

In Trinidad, there is no political party with an anti-tar sands analysis at this time. Historically the Baseo Panday administration tendered the first agreement with Western Oil Sands of Canada, which was terminated in 2008. Later, an exploration permit was announced for Petrotrin by Conrad Enill when he was Minister of Energy and Energy Affairs in 2009, working for the Patrick Manning led PNM government. The first Minister of Energy and Energy Affairs of the People’s Partnership, Carolyn Seepersad-Bachan, promoted tar sands as viable, while current energy minister Kevin Ramnarine has been blatant about the government rationale for seeking tar sands developments from Indian, Canadian and other sources. “What we need are projects that replace the Alutrint smelter,” on the Union Estate, he said.

History tells us that Trinidadians will rely on themselves to make decisions that set the destiny of the islands, and will make the politicians follow. If there is to be a national discussion and decision on industrialization in the southwest peninsula, it will be because community members organize. A smelter that would have brought devastating but smaller amounts of pollution and risks to the region was already stopped by an informed and mobilized population. The right to know what is being proposed for Trinbagonians – especially those who live in or near La Brea – is the first step to democratic participation in the future of the country. We hope this publication helps further this informed reality.

**If there is to be a national discussion and decision on industrialization in the southwest peninsula, it will be because community members organize.**

# OVERVIEW: TAR SANDS IN T&T

## Tar sands are the dirtiest oil, dirtier even than a smelter

It was February 13, 2009. People throughout Trinidad were celebrating the annual Carnival. For a day or two, few people were keeping up with government announcements. It was then the People's National Movement [PNM] government and the former Minister of Energy and Energy Affairs, Conrad Enill, announced publicly that Trinidad and Tobago had given an exploration license to Petrotrin to possibly develop tar sands as an industry similar to the Canadian model. Carnival finished and life returned to normal.

Fast forward a little. In early 2011, the governing People's Partnership [PP] Minister of Energy and Energy Affairs, Carolyn Seepersad-Bachan addressed a crowd in Sangre Grande about illegal quarrying, heavy oil in the Gulf of Paria and other issues.

Seepersad-Bachan also promoted tar sands development:

"Another way we can increase crude production, especially at today's oil price would be to mine the close to 2 billion barrels of oil in place that we have in the South West area of our country. We know there are environmental challenges to the mining of tar sands. But we also know there are players in the international marketplace who have been successfully mining tar sands in a safe and environmentally acceptable manner, for the production of synthetic crude."

These pro-tar sands industry comments were made the same day Petrotrin released documents related to planned developments for Trinbagonian tar sands. Highlights include talk of mining for bitumen at a depth of 600 feet, and a note that tar sands licenses for Petrotrin are "to be granted outside the competitive bidding process to undertake a specific scope of works."

Alongside potential large scale investors are large physical components required for tar sands bitumen extraction. Like a jigsaw puzzle, the pieces are lining up and interlocking in Trinidad and Tobago's South-west peninsula.

Refineries are a key element of the proposal. It is not possible to use a refinery that was constructed for conventional oil for bitumen refining without a massive upgrade.

In Trinidad, the Point-A-Pierre refinery has undergone two major, multi-year long upgrades in the last two decades costing billions of TT dollars. Tar sands refining has long been a part of the plans. In 2002, while working for Petrotrin, Kelvin Harnanan told the *Oil and*

*Gas Journal* that Petrotrin is "focused in the medium term on sulphur in gasoline and diesel and the feasibility for tackling the bottom of the barrel."

The so called bottom of the barrel, according to Harnanan, includes huge quantities of bitumen in Trinidad's South-west.

The area of interest for tar sands development begins approximately one kilometre southeast of the Pitch Lake, near Vessigny. Associated industrial sites would extend north of the eastern stretches of Point Fortin. The Pitch Lake and surrounding areas are known for their sulphur content.

Synthesizing bitumen on a large scale requires vast energy inputs, in the case of Trinidad this would be supplied by natural gas. Near La Brea there is a new

**This is not to say all or even any of the proposed industrial projects in the south-west are specifically or even primarily for tar sands development. However, every single one of these infrastructure projects make tar sands cheaper, more practical and more viable than without them.**

gas-fired power plant that could suffice to power tar sands extraction. As it was built on the site of the defeated smelter, the plant's proximity to tar sands deposits is so convenient it appears pre-planned.

A stone's throw southwest on the other side of the Southern Main Road from the power plant is the location of a desalination plant, which will convert water from the ocean into fresh water. Given the lack of fresh water in the region, the water needed for extraction could be supplied by this plant.

The industrial equipment from giant trucks to conveyors, slurries and upgraders all require large roadways. The highway expansion project in southwest Trinidad from Point Fortin to two points outside San Fernando could greatly assist in the moving of tar sands related heavy industrial equipment. In fact, the southeastern point of the proposed tar sands area of interest also coincides with the contested portion of the current highway expansion projects. The Mon Desir to Debe stretch of the proposed highway may allow for heavy traffic to bypass San Fernando all the way to the refurbished Point-A-Pierre refinery.

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industrial projects in the southwest are specifically or even primarily for tar sands development. However, every single one of these infrastructure projects make tar sands cheaper, more practical and more viable than without them.

Indications are that Trinidad and Tobago's government does not wish to have public participation in discussions about moving forward with the tar sands.

Reliance Energy of India has already signed a Memorandum of Understanding with the T&T government to construct a bitumen upgrader, another essential component for extraction and synthetic production into crude. Current Minister of Energy and Energy Affairs Kevin Ramnarine only publicly spoke of this agreement following the T&T trade delegations return to the Twin Island nation in January, 2012. The agreement was signed the previous Fall.

All told, there can be no doubt left that now is the time to decide the future of southwest Trinidad: Should Petrotrin and foreign corporations be allowed to turn the Peninsula into a toxic, permanent sacrifice zone? Will Trinis have a say in massive decisions over a vast area of their small country?

PHOTO: Construction of a desalination plant, across the Southern Main Road from Union Industrial Estates



# TAR SANDS 101

## An introduction to the world's dirtiest oil

Tar sands, sometimes also called oil sands by industry, are deposits of clays, dirt and bitumen all mixed together and spread throughout many parts of southwest Trinidad.

For decades, tar sands have been quarried on a small scale to make a relatively harmless substitute for asphalt and sold off of trucks to locals who wish to pave their driveways with this somewhat spongy form of natural asphalt. Bitumen, however, can be artificially extracted from the clays, dirt and silts it is mixed with naturally, chemically altered and later upgraded into a synthetic crude oil that can further be refined into many petroleum based products.

There are two main procedures for creating this synthetic, mock crude oil. One is a form of surface mining. The other is called *in-situ*, which usually involves a process called Steam Assisted Gravity Drainage, or SagD. Less common for in-situ extraction is Cyclic Steam Stimulation, or CSS.

When tar sands are mined, the area that is identified to contain bitumen is cleared of all forest cover. Then the company extracting the bitumen breaks ground, which means to suck all of the water off the surface areas and prevent further water collection. Then the company removes what industry calls overburden – all the life giving soils, roots and everything of any sort above the bitumen deposit. and collect it in piles or otherwise until after the mine is exhausted. In Canada, the overburden above tar sands deposits can be up to 200 feet, or 65 meters deep.

In T&T government publications, predictions of excavations up to 600 feet (roughly 200 meters) have been made. After the excavation is complete to the bitumen level, giant trucks cart multiple tonnes of bitumen (some in Canada carry hundreds of tonnes each load) to a conveyor that will dump the tar sands into what is called a slurry. The slurry then uses high quantities of natural gas to heat massive quantities of fresh water and “spin” tar sands mixed with this steam/water until the clays, dirt and silts separate from bitumen. On average, three to five barrels of fresh water are made

toxic to produce one barrel of synthetic oil. This water, which will remain toxic for a predicted six centuries, contains heavy concentrations of lead, mercury, zinc, cadmium, arsenic and most deadly of all – polycyclic aromatic hydrocarbons [PAHs]. In Canada, it is collected in enormous tailings ponds so large that they are visible from outer space.

Water usage varies greatly; some *in-situ* operations have used less fresh water than mining while others have poisoned over a dozen barrels of fresh water per barrel of synthetic crude produced. The water is either left in the deposit when bitumen is extracted or is re-injected into the same well after it returns to the surface with the bitumen. This toxic water then may easily get into the surrounding ground water and aquifers.

*In-situ* operations produce far more air pollution than mining operations. The same metals and toxic chemical by-products released into the water are released into the air in large quantities with *in-situ* operations. All of the various chemicals have been linked to multiple common and rare cancers, heart diseases, central nervous system and blood disorders, and a host of respiratory problems.

Both procedures for extracting tar sands are far more energy intensive than regular oil production. Mining for tar sands produces approximately three times the amount of greenhouse gasses as conventional oil, while in-situ extraction can produce up to nine times the amount of green house gasses.

In North America, Canadian tar sands rank second only to coal in terms of accelerating climate change. Yet the bulk of future tar sands production is to be in the even more CO2 intensive in-situ areas that comprise the bulk of Canadian bitumen deposits.

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# WHAT WOULD TAR SANDS MEAN FOR TRINIDAD?

## Canada's example points towards a toxic future and climate chaos

If tar sands were to be developed in Trinidad, what would happen to communities from La Brea to Point Fortin?

Vessigny, Guapo, Parrylands and Vance River are all on top of the ground that holds bitumen in place. What are the prospects for La Brea itself? There may be lessons from the experience in Canada, but in a sense, the Canadian parallel is incomplete.

Despite the much greater average distance for communities in Alberta from the tar sands mines themselves, alarming health problems and rising mortality rates have been reported for many years. The city of Fort McMurray, upstream and away from the majority of reported health effects, has instead had major social problems directly related to tar sands developments.

For a number of years now, members of the primarily indigenous community of Fort Chipewyan, which lies more than 200km downstream from the actual mining operations, have traced the main reason for increasing illnesses and even deaths of many people from “Chip” to the massive tar sands mines. The vast Athabasca River (from where water is syphoned off in the extraction process) catches at least some levels of the toxic materials that are by-products of extraction. These materials involve heavy metals, not limited to: arsenic, cadmium, lead, nickel and mercury – alongside polycyclic aromatic hydrocarbons [PAHs].

The impacts of these compounds on people depend on how they enter the human system. These materials are spewed into the air when flaring occurs at a refinery, but can also be found in the ground, water and air in differing volumes near tar sands mining and *in-situ* extraction. If there were to be mining in the tar sands deposits south of Pitch Lake, the separation of bitumen from clays, sands and silts would

use large amounts of fresh water. This water would become toxic during extraction and would not be able to be returned to the groundwater table or the local waterways. In Canada, large tailings ponds are known to leach, which means that chemicals seep out of the ponds and contaminate soils, water, plants, animals and ultimately people. An even greater fear would be if one of the retaining walls of the massive waste impoundment areas were to fail, allowing toxins to flow directly into the ecosystem.

The mostly Cree Indigenous community of Fort MacKay is surrounded by the giant mines, as well as several *in-situ* operations. Evidence from MacKay is anecdotal yet undeniably powerful. A large number of children in the community are suffering from breathing problems such as emphysema and asthma. While the source of tap water for the community is away from industrial activity, since November of 2011 Fort MacKay has been supplied with bottled drinking water. With the stacks blowing out carcinogens from the various extraction plants at the mine sites in the area, local consumption of fish, moose and wild berries directly exposes the community members to toxins that have built up in the ecosystem.

Official rates of cancers, auto-immune diseases and heart problems are easier to gather from Fort Chipewyan, where the community has made their concerns known for a number of years. A local physician even went public and was censured by the government – before being cleared of all wrongdoing. A minimum of two and possibly more than six cases of cholangiocarcinoma have appeared, a rare, cancerous disease that affects the bile duct and should appear only once in 100,000 persons given a normal distribution. Fort Chip has 1,200 year round residents. Multiple other cancers have appeared, and the provincial government confirmed in a 2009 study that cancer rates in Fort Chipewyan are at least 30 per cent higher than expect-



ed. While further studies into these numbers have been recommended, they have yet to be carried out.

Independent monitoring of water and animal contamination has been carried out in a number of ways – building upon noted anomalies. Villagers who caught local fish out of Lake Athabasca (into where the river flows) have long noted visible deformities in approximately 15 per cent of fish, including giant sores and bent spinal columns. A study conducted by Dr. Kevin Timoney found levels of mercury in the fish that were recorded at levels much higher than any safe amount for consumption. When hunters caught moose, the flesh was noted to be off-colour; a government study indicated the moose meat had more than 400 times the safe level of arsenic. Provincial studies later downgraded that level of arsenic to 30 times the safe level for human consumption.

Auto-immune diseases and cardiac (heart) problems are also of major concern in “Chip”, a community that has become internationally known not for the amazing beauty of surrounding areas but rather for the problems of their health.

The workers in the mines and *in-situ* operations rarely see data on their own health impacts from contaminants, but the tar sands has had a serious impact on their lives as well. While nearly one in three people in

Fort McMurray lives under the poverty line, the vast influx of specialized workers has broken much in the sense of community for local residents.

Workers are overwhelmingly single men with few ties to the community. The work camps, essentially barracks for workers from out of the area to live near the operations, are infamous for high levels of drug and alcohol abuse, from crack cocaine and crystal meth to hard liquor. An underground economy for clean urine so workers can “pass” drug tests has become widespread, as have sex-workers both serving the off duty workers, or working in the survival sex trade for shelter in a town that has long since run out of affordable housing. A new, modest home can cost easily over US \$1 million and renting a couch spot for sleeping can be well into four figures a month.

All of these impacts occur in communities that are much farther away from tar sands developments with the exception of Fort McKay – than any of the communities south of Pitch Lake. In many cases, people who live in areas such as Vessigny are living right on top of bitumen deposits. The industry – if it does not call for mass re-location of entire families – could eliminate the forests right up to the property line of residents. Where today are trees, marshes and places families can grow vegetables may tomorrow end up as contaminated landscapes void of natural life.

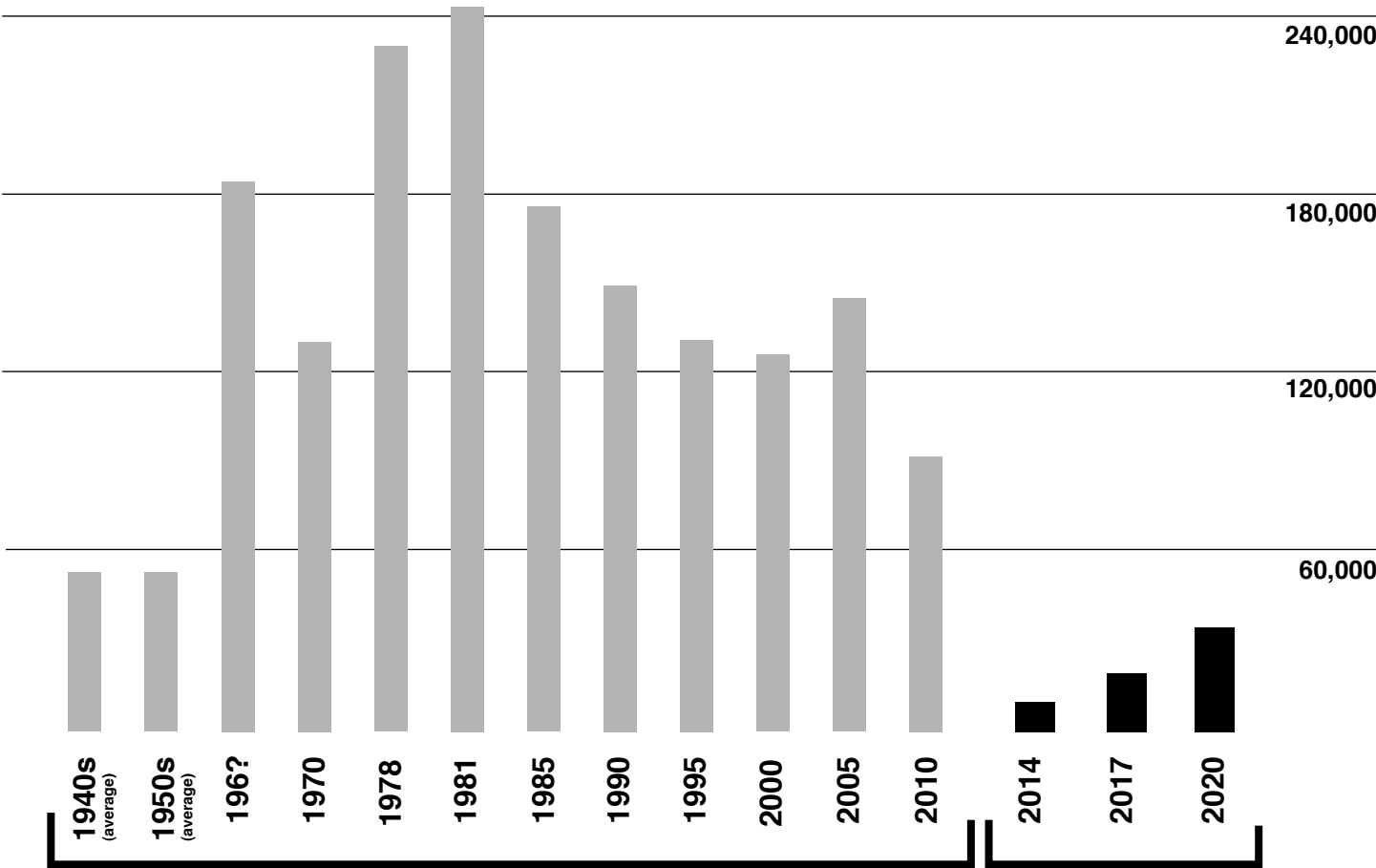
PHOTO: Open excavation of bitumen sands south of the Pitch Lake





# Trinidad and Tobago oil production

barrels per day (peak)



Conventional oil production, 1940-present

Tar sands production (projected)

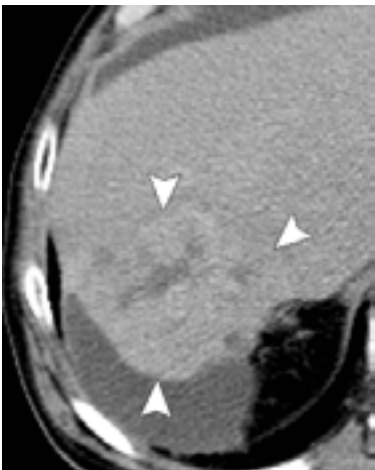
First successful well: **1866** Commercial production: **1908**

*Cholangio carcinoma* is a rare cancer; statistically, cases appear in one in every 100,000 people. Fort Chipewyan, Alberta lies downstream from the Canada's tar sands, and has seen several cases among its 1200 inhabitants in recent years. If the same rates were to occur among a larger population, the results would be widely recognized as catastrophic:

In Fort Chipewyan...



...in a population of 100,000.



A CT scan shows cholangiocarcinoma.

# CLIMATE CHAOS, WORLD WIDE

## Will a lack of cheap oil collapse the economy before an abundance of cheaper oil collapses the climate?

Trinidad and Tobago has already experienced multiple shocks to the economy over the years, demonstrating the economic vulnerability of a country dependent upon oil.

With conventional oilfields and many offshore fields either peaked or well into decline throughout the nation, record high prices of oil in the last decade have not brought greater economic benefit nor security to the country.

Indeed, with daily production now averaging under 100,000 barrels of crude a day for 2011, the irreversible decline of oil reserves has left Trinidad vulnerable economically. It also means the nation's story is an almost perfect mirror reflection of the global situation.

A reality check is in order. Current CO<sub>2</sub> levels are at over 390 parts per million (of carbon in the atmosphere). Experts on climate modelling state that 300 parts per million is the only non-destructive level to aim for, while 350 is the upper level of safe or controllable CO<sub>2</sub>. Suffice to say that at 390PPM, the problems of climate change are already hitting home.

The escalating problems of climate change alongside the fact that global reserves of conventional oil are either peaking soon or have already peaked is creating (literally and figuratively) the perfect storm.

Public discussion of peak oil quieted alongside the drop in oil prices at the start of the economic recession. The reasons for the drop in oil prices were misidentified as the refutation of peak oil, when they were anything but. In fact, globally just as in Trinidad and Tobago, extreme extraction such as the development of reserves of tar sands, mined oil shale, fracked oil from shale, extra heavy oil and ever deeper offshore wells all point towards peak oil. The hard to get oil is being targeted because the easy oil is gone or depleting. The price of a barrel of heavy, dirty oil is high

enough to offset the much higher extraction costs because of the lack of conventional supplies alongside a continually rising demand (in particular for rapidly developing economies such as India or China).

Canada, like T&T, peaked in conventional crude production in the 1970s and 80s. Tar sands today make up the bulk of Canada's oil production numbers, which are set to grow exponentially in the future.

Peak oil has led global energy companies such as Royal Dutch Shell, Statoil of Norway, BP of Britain, TOTAL of France, Sinopec of China plus Exxon, ConocoPhillips and of course Sunoco of the US to focus internationally on new forms of extraction in general, and Canada's tar sands in particular. By way of example, Shell has the bulk of their global reserves in dirty or unconventional reserves.

The exploitation of tar sands, aside from the impacts on local communities, has turned the Canadian government into a climate change villain on the world stage. Canada withdrew from the Kyoto protocol at the end of last year's UN-organized climate meeting, the Conference of the Parties (COP), despite being rebuked for doing so by activists around the world, including some members of the Chinese government delegation.

These international developments were followed up by federal legislation by Canada's ruling Conservative Party, which decimated environmental oversight and monitoring on everything from oceans to reviews and hearings on projects. Combine this with the cancellation of various federal programs around climate change and new fiduciary requirements of federally recognized charitable organizations that work on environmental issues, and a picture of the rampant anti-ecology ideology in Canada's halls of power begins to emerge.

The stakes are high. The number one supplier to the US energy grid every day is not Saudi Arabia but

Canada; the number one source of that supply within Canada is tar sands (and by quite a margin) and the number one customer within the US energy grid is the US military.

Dirtier bitumen, when converted to fuel, produces larger volumes of higher quality jet fuel – some of which ends up in F-16s and drones flying and dropping bombs around the world over oil producing countries, so as to begin the extraction process anew.

Peak oil and climate change have a particularly nasty convergence when it comes to US imperialism.

Roughly, the plot is this: Peak oil leaves American energy interests to seek new supply. A war on Iraq combined with Hurricane Katrina (likely itself caused by climate change) create record highs in global oil prices. This leads to a rush on Canada's tar sands, which are now affordable because oil prices spiked to more than US\$70 a barrel. A lack of resolution in the various wars and conflicts in regions of the world with oil deposits that could still be expanded – Iraq, Nigeria, Sudan, Iran and so on – necessitated that the US military secure more oil from other regions. In sum, tar sands developments reached a record development pace.

As the amount of oil extracted in Canada to maintain fuel supply to the US military has grown, so have carbon emissions that cause climate change.

Climate change on a global level will hit low-lying countries, islands and central Africa first and hardest. Scientists predict that island nations such as the

Maldives are set to disappear, while temperatures rise (and precipitation drops) in African nations, which will mean diminishing and disappearing food crops.

In order to minimize or prevent runaway climate change (the point where climate warming begins to release climate warming gases from permafrost in the Arctic regions, creating a snowball effect of uncontrollable emission release and a higher temperature rise globally) the opposite of expanding the dirtiest fossil fuels is immediately needed.

Tar sands, it can be said, hardwire oil-producing states to deeper reliance on oil for capital, while also rewiring the global energy grid onto ever dirtier fossil fuels.

On average, global oil consumption is over 82 million barrels per day (mbpd). With Indian and Chinese growth in particular, it is estimated that, unchecked, the demand for oil may reach 110 mbpd within a couple of decades at the latest. This is likely impossible, however, even if all these extreme extractions were to arrive ahead of schedule. Conventional oil that is cheaper and easier to extract continues to decline around the world, while we do not have the energy needed to extract dirtier at such a rate.

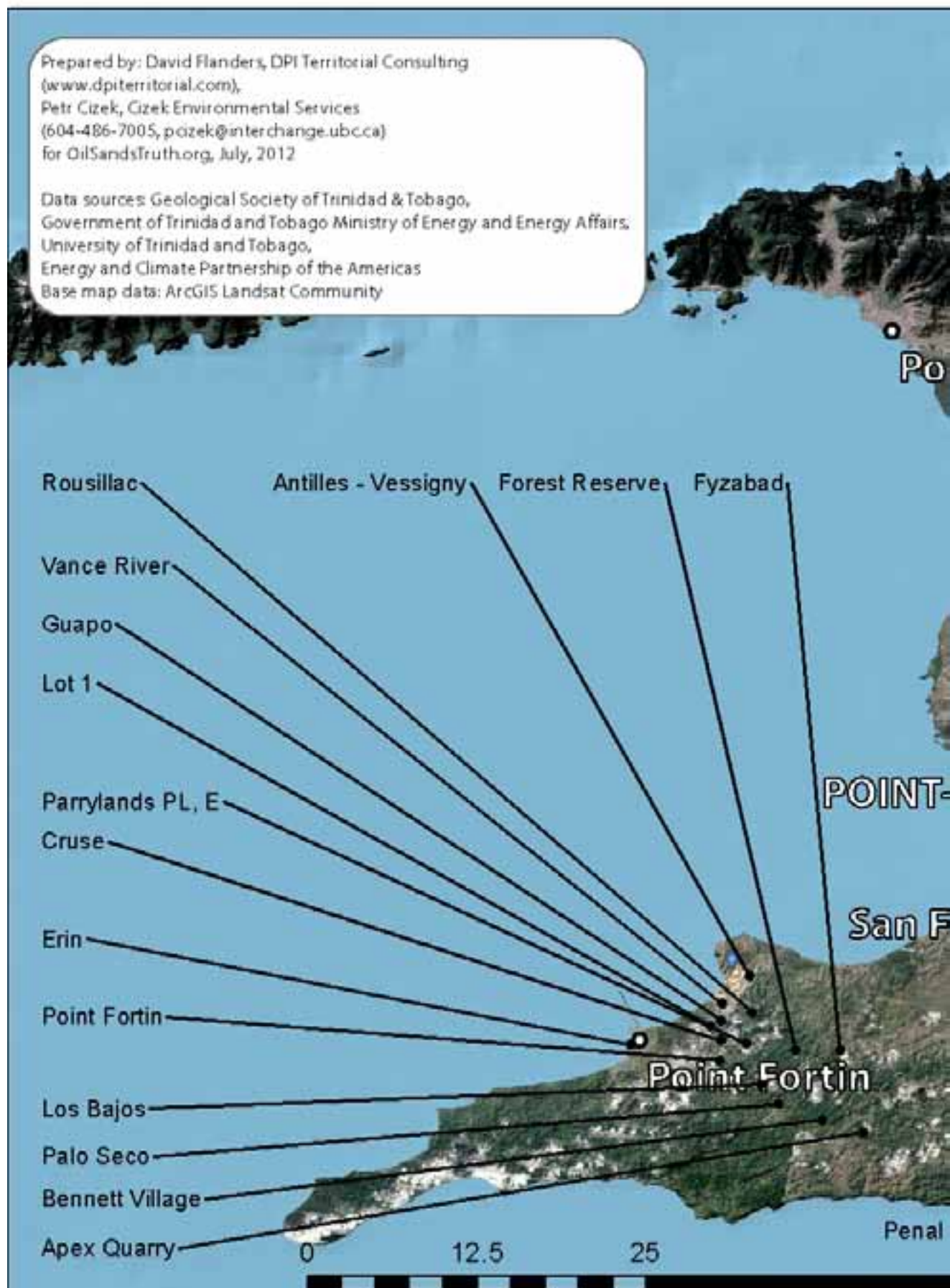
When supply cannot meet demand in a normal resource play, the resource becomes prohibitively expensive. When that happens for oil, however, the economy of country after country stalls and enters a process of entropy. The perverse reality of a world with dwindling conventional oil alongside a tattered and tarnished climate is a race for collapse.

PHOTO: The Thunderhouse oil platform, located in the Gulf of Mexico, was severely damaged after Hurricane Dennis in 2005. google images.





# MAJOR TAR/OIL SANDS DEPOSITS



# TS AND PROJECTS IN TRINIDAD





# WHAT IS RAG?

"This struggle permits us to become revolutionaries the highest state a human being can achieve. Failing this it enables us to become men and women. Those who can attain neither of these states should say so and leave the struggle." Che Guevara

RAG is a revolutionary organization.

It is born of the sweat of those who struggle and of the blood of those who die.

RAG is the flag.

We see young people waving it at Carnival...but what is the rag?

A particularly special flag is the nation flag. This flag has many crisscrossing colours, it represents a range of patterns/spiritual energies weaved together, a confluence of communities, cultures, traditions... "nations".

The flag represents this the primal unity of all our people's lifegiving energies. RAG is to be organically rooted in this the substance of our people's life.

RAG is a movement of transformation.

RAG seeks a new possibility of community. The community is the people.

It is commitment to societal transformation. Engaging the possibility of community, of justice and peace, of love rooted in the life of our people and our Earth. Such commitment takes place within the operational field of the RAG process. It is embodied in the collective struggle that is cadre and gathering.

This struggle is the struggle of and for Mother Earth. Radical all-consuming commitment to the Earth is a defining characteristic of our species, for Her we are prepared to kill and to die. Let us not be found unworthy.

This struggle is the miracle of possibility, the miracle of life itself, the miracle that such an organization exists.

*Burton Sankeralli*

*May 22, 2006*

*Rights Action Group executive.*

*Contact: bsankeralli@yahoo.com*

PHOTO: Pitch Lake

## TRINI ECO WARRIORS




### Trinidad & Tobago's Eco Forum

To provide a forum to promote environmental awareness, advocacy and education through the use of photography and video as well as all other media types to encourage the people of Trinidad & Tobago to become more conscious of their environment and the need to protect our diverse ecosystems for their own benefit, and the benefit of future generations.

**ADVOCACY • AWARENESS • EDUCATION**

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# TAR SANDS OR OIL SANDS?

Both terms represent the same thing, a deposit of bitumen mixed with clays and sands and silts. "Oil sands" has become the official term in a rebranding effort by energy companies and the different levels of government in Canada. Many opponents of bitumen extraction methods prefer "tar" due to the fact that many local indigenous populations used bitumen found on the river banks to patch their canoes centuries ago, much as one would use tar to patch a leaky roof in the modern era. Neither term is fully accurate, as "bitumen sands" would be even closer to the reality.

Oil sands in Trinidad's southwest peninsula often refers to small scale quarries which produce an asphalt substitute.

## BITUMEN

Bitumen is the hydrocarbon based pre-oil lumpy building block that can ultimately be synthesized into a crude like substance for further refining. Much heavier than even heavy oil, it cannot flow in a pipeline until mixed together with a kerosene like by-product called either diluent or condensate. With far greater energy inputs than conventional light oil bitumen can be upgraded and ultimately refined into a substitute for almost all oil related products (such as gasoline, jet fuel and petro chemical by-products such as fertilizers or plastics).

## MINING (TAR SANDS)

A process for extracting the bulk of the Canadian tar sands currently and likely the main extraction planned in Trinidad. Mining occurs in areas where the bitumen in place is too shallow to extract "*in-situ*", or "in place". Mining involves removing all tree cover, all existing plant life and stripping any waterways from above the bitumen deposit. It then brings it to the plant and eventually the upgrader through the use of giant shovels and trucks (in Canada the trucks are called "heavy haulers").

## IN-SITU (EXTRACTION OF TAR SANDS)

*In-situ* is a Latin term for "in place" that will ultimately be the method of approximately 80 per cent of tar sands extraction in Canada if every project possible were to go ahead. *In-situ* operations are multiple and varied but all remove the bitumen from the earth through in the ground extraction that does not involve mining. *In-situ* operations average similar fresh water rates and three times higher energy use than mining, meaning a much greater negative impact on the climate.



# SPIN CYCLE

## Pushing tar sands means going into public relations overdrive

The story of the tar sands in Trinidad isn't exactly a new one. A joint feasibility assessment of the tar sands in T&T was first carried out back in the 80s and 90s, ending in 1995. There were other events, reports, discussions and planning through the 90s involving Canadian government officials and businessmen. The starter gun was finally fired in 2007, when the Royal Bank of Canada (RBC) bought out the Royal Bank of Trinidad and Tobago.

### **The starter gun was finally fired in 2007, when the Royal Bank of Canada (RBC) bought out the Royal Bank of Trinidad and Tobago.**

RBC partially restored Canadian financial dominance to the island by making RBC the second largest financial institution in the country. Banking dominance from Canada – through Scotiabank, CIBC and RBC today – is not new to Trinidad. The difference is, this time it also brings the largest single financier of tar sands operations in Canada to a local head office in Port-of-Spain.

Sandra Odendahl is the Royal Bank's Director of Corporate Environmental Affairs. She spoke at the Hilton in Port-of-Spain at a Green Business Forum in March 2011, hosted by the Environmental Management Authority [EMA]. Odendahl spoke to local media about using the model for consultation in Trinidad that has been developed in Canada, in particular around oil sands and First Nations alongside other stakeholders.

RBC has promoted their investment in the development of Canadian tar sands as a model for T&T. RBC had been the target of a divestment campaign in North America, which was pre-emptively called off by the Rainforest Action Network (RAN) in December 2010 after a vague, non-specific promise by RBC to

be more attentive to First Nations needs. There is still no such thing as meaningful consultation. This pledge is non-binding and does not require that communities give a go-ahead to projects nor has it resulted in a single penny being divested from any Canadian project.

At the Summit of the Americas in Cartagena, Colombia, in April 2012, talks about the tar sands took place between Canada and Trinidad & Tobago.

According to international media reports, Prime Ministers Stephen Harper and Kamla Persad-Bissessar along with T&T Minister of Energy Kevin Ramnarine discussed how Canada can be involved in the development of Trinidadian bitumen.

Of note for these discussions were PM Kamla's and Minister Ramnarine's statements about Trinidad being a "a tar sands frontier in the making," while promoting the industry to Harper. According to the *Trinidad Express*, Ramnarine made mention of two billion barrels to Harper, earning the label of crusader for such development.

Since the end of the Caratagena summit, what press there has been regarding tar sands development in Trinidad has shifted to Canadian corporate terminology and language. Now, instead of tar sands, using oil sands is the preferred label.

Indeed, talk of *in-situ* developments and their supposedly less destructive environmental impacts have even come from the Trinbagonian High Commissioner to Canada, despite the fact that the majority of bitumen in place in Trinidad is too shallow for any extraction other than mining.



# DIRTY OIL INCORPORATED

## How tar sands extraction went global

Tar sands technology and know-how from Alberta are being exported by multinational corporations and the government of Canada itself to places all around the world, beyond just Trinidad and Tobago.

Before the US-led invasion of Iraq and the impact of Hurricane Katrina combined to produce record prices of oil in the world, Canada's tar sands developments inched along, aided by federal government subsidies and tax breaks. Until recently, other countries in the world that possessed bitumen (and there are over 70) had taken almost no steps to develop their deposits into synthetic crude oil.

Alongside the breakneck speed of Canadian tar sands development in the years following the global recession has been a revolution in oil extraction, by which unconventional, dirty, expensive deposits became financially viable. The inflated price of a barrel of crude is matched by the reduction in extraction costs, partnered with the peak in oil production around the planet. This peak has meant that global economic shocks such as in 2009 will now only drop the price of a barrel of oil temporarily at best. Demand continues to escalate as a trend while cheap, accessible conventional oil supplies contract.

As a result of dwindling conventional supplies, deeper and more dangerous offshore production is set to expand; shale oil from hydraulic fracturing (fracking) is now sucked out of the ground across North America and elsewhere; and mining or "bleeding" kerogen out of oil shale rocks in a fashion similar to tar sands bitumen extraction is a disastrous industry in its infancy. Still, the biggest prize to extreme extractors are tar sands.

Canadian processes have reduced the cost of mining tar sands to often less than \$25 [US] a barrel, and *in-situ* operations are on pace to reduce costs to similar levels. This is leading to an international scramble

for contracts in places such as Nigeria, Madagascar, Albania, Romania, Russia, various US states (notably Utah and Alaska), the Republic of Congo (Brazzaville) and Venezuela. With the exception of relatively small production in the vast Venezuelan Orinoco belt, none of the non-Canadian deposits have seen commercial production. At least not yet.

In Madagascar, TOTAL SA of France and a small American company calling itself Madagascar Oil seek to extract two major fields (Bemolanga and Tsimiroro respectively), with the larger mine proposed at just shy of 200,000 barrels of mined synthetic crude a day. This would leave Madagascar and its arid Melaky region with the second largest tar sands developments on the planet. Similar though smaller mining is proposed by ENI of Italy in the Republic of Congo (Brazzaville). Nigeria is now opening blocks of tar sands for international bidding, while Utah in the US is close to getting a go-ahead for an open-cast mine operated by a start-up Canadian company in one of the more arid land bases south of the Canadian border.

None of this includes projects in nations such as China and Russia, not noted for their environmental commitments in pursuit of industry. Venezuela also seeks to involve Chinese interests in bitumen and extra heavy oil developments.

**Alongside the breakneck speed of Canadian tar sands development in the years following the global recession has been a revolution in oil extraction, by which unconventional, dirty, expensive deposits became financially viable.**



# MYTH VS. FACT

**MYTH:** Tar sands and similar extreme forms of oil can replace conventional oil, and supplies are so large globally as to mean centuries of further oil consumption at escalating rates.

**FACT:** Tar sands, oil shale and other non-conventional supplies of synthetic oil consume far more energy than conventional oil, and cannot be produced at a rate sufficient to replace Middle Eastern, North Sea or Russian oil supplies.

**MYTH:** *In-situ* or in place tar sands development is less environmentally damaging and consumes less water than other forms of tar sands extraction.

**FACT:** In some *in-situ* operations, many times more water is consumed than tar sands mining, and all *in-situ* operations consume an average of three times the energy to produce oil.

**MYTH:** Canada is a progressive, environmentally conscious country.

**FACT:** Canada's government is one of Israel's staunchest allies and the government has repeatedly won the Climate Fossil award for its anti-environmentalist record.

**MYTH:** Canadians have excellent, clean technology by which to exploit the tar sands.

**FACT:** The tar sands is one of the dirtiest industrial projects on earth, in Canada or elsewhere.

**MYTH:** Canada has high environmental standards. By changing laws, higher environmental standards can likewise be applied elsewhere, preventing contamination.

**FACT:** Canada has extremely lax environmental legislation, allowing, for example, freshwater lakes to be used for the disposal of mine waste.

# BIG WIN AGAINST DIRTY SMELTERS

## Culture of resistance stops aluminum barons in their tracks

In the early days of a fight that would capture the imagination of people throughout Trinidad and Tobago, a woman named Alice Murray wrote a succinct note to Wade Hughes, the Director General Business Development and Public Strategy with Alcoa, the world's largest aluminum company.

It is wrong, she wrote, for the interests of one company to preside over an entire community's interest. It is wrong to destroy eight places of worship to make way for one company. It is wrong to tear down schools, community centers, a youth camp and a health center for one company. It is wrong to decimate the natural world. There is something wrong, she concluded, when the government is the main offender.

Alcoa wanted to build a smelter that would produce hundreds of thousands of metric tons of aluminum a year in Chatham, a rural town. The government of T&T signed a Memorandum of Understanding with the company in 2004, before consulting with local residents. Around the same time, a consortium of companies known as Alutrint was planning another smelter in LaBrea. Both smelters, along with other proposed industrial projects, were part of a Master Gas Plan embraced by the government of T&T in order to monetize natural gas reserves.

In response to the smelter proposals, the women and men of La Brea, Cedros, Chatham, Cap de Ville, Union Village, Square Deal, Vessigny, Otaheite, of Claxton Bay, of Pranz Gardens, and supporters from St Augustine, Curepe, Port of Spain and elsewhere went on to mount a David vs. Goliath campaign against smelters.

"We proved to most of the people that the smelter wasn't the right thing for the area. The main issue was the health, not jobs, but just the health was a concern," said Anslim Carter, a resident of Vessigny, next to the smelter site.

PHOTO: Bumper sticker near La Brea.  
ARTICLE: Dawn Paley

"And we didn't put up no ignorant fight with Alutrint, we just get our evidence and proof to the people where the smelter was not a healthy thing for the community and we worked really hard in convincing some people," he said. Carter participated with hundreds of others in a roadside camp over five or six months, as well as pickets as part of a mass campaign.

Against all odds, the people won.

"In my lifetime, I can't think of any other environmental struggle, other than a proposal to put a movie theater on a mangrove, that has captured national attention," said Atillah Springer, a journalist and community activist involved in resistance to the smelters. "It definitely became a national issue."

During their struggle against the smelters, people in resistance were criminalized and linked to narcotraf-ficking, in an attempt to smear their movement. They were not deterred, however, and persevered.

Tying their campaign of resistance to other events taking place in Trinidad and Tobago, the folks organizing against smelter projects got their word out far and wide. A woman was covered in aluminum foil before singing the national anthem, drawing attention and



news coverage from unexpected quarters. “There was an aggressive move on our part to get national interest,” said Springer in an interview from London, England, where she was participating in cultural events linked to the 50th anniversary of T&T independence.

After a concerted national campaign, the government killed the Alutrint project in 2010. “It was the logical and scientific thing to do,” said environmentalist and revolutionary Dr Wayne Kublalsingh upon learning that construction was halted. Alcoa was also stopped in their tracks.

At the time, representatives of the U.S. State Department in Port of Spain, who keep close tabs on the status of U.S. companies abroad, took note of the level of mobilization against the smelter projects. “The vehemence of public debate over aluminum may also foreshadow increased opposition to future industrial projects in T&T,” wrote former U.S. Ambassador Roy Austin. “There are also growing calls for a national sustainable development framework, especially in reference to ‘mega-projects,’ and greater public involvement in determining the path of Trinidad’s development,” continued Austin.

Austin’s words seem especially prescient today, as new proposals for tar sands extraction threaten some of the same regions protected from destruction by brave anti-smelter campaigners. The stakes are high, and there is no doubt the U.S. government continues to monitor the level of organization of communities and people in Trinidad and Tobago.

The next struggle, against the tar sands, could be even more difficult than the battle against the smelters. Since the victory against the smelters, in which some politicians supported local residents in rejecting industrial megaprojects, elections have changed the face of power in T&T, bringing in a government that Springer calls “anti-community.”

Many of the stakes in this new struggle are familiar. Tar sands extraction is as dirty as any smelter, and it will also need new infrastructure in order to get off the ground. In addition, like the smelters, tar sands operators will be keen on getting cheap natural gas to run their energy intensive operations. The government of Trinidad and Tobago has been just as sneaky with tar sands proponents as they were with Alutrint and Alcoa, hiding from the public many important details about the tar sands.

PHOTO: Mothballed refinery at Point Fortin





# STOP THE PAVE

## Camp-out against highway continues

On May first, international workers day, dozens of people got to work on a revolutionary new food forest. Just after dawn, they plowed the land, tilling the rich soil. Then, they lined up and planted pineapples, cassava, and sugar apple trees. Maybe it sounds like a typical day in the fields. It wasn't.

The land in question is slated to become a highway. "They want to take paradise and turn it into a parking lot," said Atillah Springer, a journalist and organizer.

"This is our land. We taking it back. We don't need permission from anybody," Ameena Mohammed, a local resident, told *The Guardian* while she planted a coconut tree.

MAP: Monique Walker, greentnt.org. ARTICLE: Dawn Paley

This direct action was one among many, which included the erection of a protest camp in Debe against the highway expansion. Together, these events have brought national and international attention to a struggle with deep roots in local communities.

Women residents have been making noise about the impacts of the proposed highway for some time now, but the buzz around the highway project was amplified by the protest camp actions.

Part of the new highway proposal would see a 47 kilometer long, four lane divided highway running from San Fernando to Point Fortin. The section contested by the Highway Re-route movement is a separate addition to this new highway, which would run from

## Tar / Oil Sands Area Of Interest in Trinidad







PHOTO: Soldiers and police officers handcuff lead activist of the Highway Re-route Movement, Wayne Kublalsingh, during the camp's demolition. They rebuilt the camp three days later. PHOTO: facebook

Debe to Mon Desir, impacting 13 communities in the Oropouche Lagoon, and include the construction of an interchange.

The battle is about far more than a highway. It is about the future and the past of the country.

According to Dr. Wayne Kublalsingh, if built, the \$7.2 billion roadway would destroy 1,000 acres of farmland, destroy 300 homes, and create permanent flooding. "The amount of damage it will do, I don't think is justified," he said.

People who for generations have lived in the serene lagoon area stand to lose their land and their connection to it. Or, in the words of the Highway Re-route Committee, "Peaceful and empowered communities would be broken up, and homesteads and farms seized."

"They can't done pay me money for this," Ivan Ramdass, whose grandfather settled the land and raised nine children farming on Banwarie Trace, told *Trinidad Express*. "How can they want to just shove you out just so? And what they giving us in return?"

The level of repression used by the government in evicting the protest encampment from the highway's path shows how important this infrastructure is to the state. When the camp was destroyed the first time, none other than National Security Minister Jack Warner was there to oversee the police and soldiers who carried out the job using heavy machinery. "The first time it was the soldiers, a minimum of police, maybe five or six, there were 30 or 40 soldiers, they were

instructed by Minister Warner, Minister of National Security," said Kublalsingh.

Following the second eviction, campers moved to erect a new camp, one on privately owned land, and another in front of the Palace of Justice in Port of Spain. The camp in the capital was taken down in early August as a court case against the eviction got started.

"One of the issues we're challenging in court, whether they had a right to destroy that camp, I mean, legally whether they had the legal right to do it, and also my detention," said Kublalsingh.

When the highways were first proposed in 2004, they may have been part of an industrialization plan that included two proposed smelters, which were also shut down as part of a movement which Kublalsingh helped support.

Though the government is seriously entertaining proposals to set up tar sands in Trinidad and Tobago, it is too early to link the highway construction – some of which could eventually benefit companies involved in extraction – to the tar sands.

"Whether there is a link between the highway and the tar sands, I really cannot say, I cannot say that for sure," said Kublalsingh.

While campers maintain a presence in the lagoon area, keeping a watchful eye for any signs of movement, another group will fill the courtrooms, confident that they can stop the pave by appealing to justice.

# AH PLAYIN

Stop! Stop! Stop!  
And doh get tie up  
You mocking pretender  
Yuh might see mih in suit and  
tie  
So yuh say doh bodder wit...  
dat guy  
Or in a ole juzzy...  
Doh worry wit he.  
But yuh bonx yuh head

Now tell me...  
Bandit does play bandit?  
Tief does play tief?  
No...!  
Dem does play police and poli-  
tician  
An' big time businessman

Well in de same way  
Robber doh play Robber  
And I am indeed verifiably  
De dreadest dreadest dread  
Prince ah robbers  
An' king of tief  
It is I who primevally ascended  
from the deepest darkest  
bottomless pit

And crawled out from the pri-  
mordial slime  
In the very beginning of time  
And having learned the fine and  
obscure art of...  
Perambulation  
I stalk de high and de low  
Devouring all  
Where e'er I go

Yes...  
Robber doh play robber  
Tief doh play tief  
We does play  
Politician police ...and pries?...  
De tree "p"s  
Having you at dere mercy

It is I who does empty your  
treasury  
As I own your body  
While enslaving your mind  
Having my way wit your girl  
chirren  
And leave your sons bleeding in  
de street

Yes yes yes!  
Robber doh play Robber  
Tief doh play tief  
Dey does play men of  
peace  
Because all I want...  
IS PIECE!!!!!!

Piece of yuh  
heart  
Pierce of yuh  
soul  
Piece of de  
planet  
Man ah eatin it  
whole...

Yeaah...!  
Robber doh play Robber  
Tief doh play tief  
I am the King of international  
disorder  
My wuk is to hand you grief  
Globally I rape and I plunder  
Wrecking havoc ... we call it...  
"the economic order"  
I traffic in wars bloodshed dis-  
ease drought famine...  
Industrial destruction and envi-  
ronmental degradation  
And all manners of murder and  
mayhem...  
That which you may know as  
the capitalist system...

Oh ho...  
Robber doh play Robber  
Tief doh play tief  
And of dese I am King  
I am de big big biggest Chief

Yeah is me who have you  
suffrin in poverty  
In my alphabet there is no "m"  
for mercy  
For I am clearly and definitively  
And most certitudinously...  
A walking one Robber...  
State of emergency!

Doh bonx yuh head!

*Burton Sankeralli  
Rights Action Group  
Carnival Sunday 2012*

PHOTO: Burton Sankeralli  
reads a poem at  
Independence Square



# **EVERYONE'S DOWNSTREAM 2012 TRINIDAD AND TOBAGO**

a conference on environmental issues and in  
opposition to tar sands development

Conference to be held in the Twin Island Nation at the end  
of November. Check [everyonesdownstream.org](http://everyonesdownstream.org) for details.