

*Science and Society Series: 8*

# **Cuba Without ISMS**

*Road to a fossil fuel fress society*

**T. Vijayendra**



**Jana Vignana Vedika**

## ***Peak Oil and the World Crisis Today***

Since 2008 the world is going through a huge economic crisis. This economic crisis, as we know, is leading to a worldwide collapse of the system. Since then capitalism is beset with one after another global crises. After the housing crisis in the USA, there was the financial meltdown, then the debt crisis in Greece, Ireland, Italy, Spain and Portugal. More recently the mass movements in West Asia have once again sent the oil prices soaring upwards. Today with the prospect of Greece leaving the EU, Europe is heading towards a deeper crisis. One of the major contributing factors for this crisis is a phenomenon called “Peak Oil”.

What exactly is ‘Peak Oil’- which is likely to lead to the end of the industrial era? At the present rate of consumption, all available oil will be used up within this century. But peak oil is not about when we run out of oil, but rather, when the production of oil starts to decline, and this has already happened. While expert opinions differ, most of them seem to agree that it is already behind us (2005 - 2008) and we are witnessing the effects in the global crash of capitalism!

Although wide scale use of petroleum and its product has a history of only about 100 years it has become central to the very existence and functioning of modern societies. Transport and power are central to modern societies. Moreover there is

always an annual increase in its demand, popularly known as growth. Any decline in its supply threatens the very fabric of this society. 'Peak oil' does exactly this and endangers the collapse of the system.

Peak Oil crisis starts with rise in petroleum prices. For some time the figure of USD 100 per barrel of crude has been considered to be the turning point. On November 21, 2007 oil price hit USD 99. In 2008 it reached USD 147, Due to global recession the demand for oil and therefore its price tends to fall. Still it will never go back to old prices. It is hovering around USD 100.

The empire is imploding and collapsing. Whether the collapse comes in a couple years or a decade is not predictable. There are too many fast changing variables, the most important being the people's struggle against it and the vision of an alternative society. But irrespective of the date, the world has to face either chaos or prepare for a transition to a society based on lower energy and equity. Such a society will have different forms in different parts of the world depending upon their history. Cuba offers one such transition model.

Cuba is where "Peak Oil" hit in 1989 - in an artificial manner - because in the world as a whole, there was no shortage of oil. Only the Soviet system had begun to collapse and Cuba stopped receiving petroleum from the Soviets. This was its only source because of the US embargo. Cuba was put to its greatest test and it passed with flying colours! The year 1989, ushered in the 'Special Period' in Cuba, a scenario that has hit the rest of the world now. The world, however, is not as prepared to meet it as Cuba was. In the case of Cuba we can see the whole experience of Peak oil, economic crisis and recovery. Even with regards to global warming, which has become a major crisis now, Cuba has achieved all the goals of reducing its carbon emissions. Thus Cuba has lessons for all on how to meet the present challenge.

The word 'isms' represents a group of words ending in

'ism', like colonialism, neo colonialism, capitalism, socialism, communism and anarchism. Although these words will be used in the text, the idea is that the existing meaning of these words should not bog down the reader. While the Cuban government calls itself 'A Socialist State', these words have different implications in different historical contexts. The experience of Cuba is too important to ignore and one should be prepared to learn without these pre-conceived notions.

The special period in Cuba is like a real time model; large enough to prove its viability. However it is never easy to repeat what someone else has done. North Korea too faced the same problem as Cuba did in 1989 but did not take the path of Cuba. Today Zimbabwe is facing the worst economic crisis and one cannot say how the country will deal with the setbacks.

### ***The story of Cuba***

Cuba is an archipelago, that is, it is a group of islands situated in the Caribbean Sea between the two Americas. There are two main islands - Isle of Cuba and the Isle of Youth and some 1600 small islands, with a total area of about 1,11,000 square kilometres. It has a population of about 1.1 crore (2001) and a density of 100 persons per square kilometre. It is a tropical country like Kerala in Southern India with a rainfall of 1300 mm (52 inches) per year. The main food crops are rice, corn, cassava, beans, plantains and citrus fruits.

### ***Colonialism in Latin America and in Cuba***

Modern colonialism in Latin America began with the voyages of Christopher Columbus and Vasco Da Gama in the closing years of the 15<sup>th</sup> century. Columbus who actually started for India reached Cuba in 1492. While the Americas were rapidly colonised in the 16<sup>th</sup> century with genocide and mass killing of the bison population, colonialism did not succeed in India except in Goa. It took another 250 years for the East India Company to get the *Diwani* (Rights to collect revenues and taxes) of Bengal in 1765. Another particularity is that local

languages were almost completely replaced by Spanish. Spanish is the common language of Latin America (except in Brazil, Haiti and West Indies) and its literary tradition has played a unifying role in the region. The Latin American intellectual therefore often reads the same books, and is influenced by the same thinkers and writers. This difference is crucial to understand why the Latin American countries, and in particular Cuba, in spite of the paucity of resources, has made such rapid advances in social, political, educational and professional spheres. To mention in passing, it also explains partially the difference between Goa and rest of India.

Prior to the arrival of the Spanish, the island was inhabited by Native American peoples known as the Taíno and Ciboney. The Taíno were farmers and the Ciboney were hunters and gatherers. The Spanish colonialists made Cuba the headquarters of their empire. They brought nearly five hundred thousand slaves from Africa as farm labourers, destroyed the traditional subsistence economy and created sugar plantations with slave labour.

### ***Independence and Neo Colonialism***

By the 19<sup>th</sup> century, the USA had grown in power and was contending to expand its influence in South America. The USA fought with Spain and supported independence movements. These 'independent' countries actually became neo colonies of the US with the US capitalism taking over most of the business in these countries. Most of it was mining and plantation. Cuba too faced this and there were attempts to liberate itself throughout the first half of the 20<sup>th</sup> century. It ultimately saw success in 1959 with the Fidel Castro coming into power.

### ***Revolution and its achievement***

Fidel Castro became the prime minister of Cuba in February 1959. In its first year the new revolutionary government expropriated private property with little or no

compensation; nationalised public utilities; tightened controls on the private sector; and closed down the mafia - controlled gambling industry. Some of these measures were undertaken by Fidel Castro's government in the name of the programme outlined in the Manifesto of the Sierra Maestra. The government nationalised private property totalling about \$25 billion US dollars, out of which American property made up only over US \$1.0 billion. Cuba faced opposition from the USA and a trade embargo. Cuba turned to the Soviet Union which helped it to develop. It bought sugar from Cuba at a high price and gave it oil, machinery and food at a cheap price. Even before Castro's coming to power, Cuba already had a well developed economy. With Soviet help and its own revolutionary programme it made rapid strides in education, health and invested in programmes for the general well being of its people. It also defended itself against efforts by the US to destabilize the government, assassinate its leaders and even invade territory.

### ***Employment and Trade Unions***

In Cuba, the National Labour Code legislation comprehensively guarantees workers' rights. It guarantees workers the right to belong to a trade union and the state has the responsibility of finding work for every one over the age of 17 including those with disabilities who are able and willing to enter employment.

Cuba has a work force of 40,00,000 of whom 98% belong to a trade union. Women make up 43% of the trade union membership and account for 58.9% of officials at the regional level. In addition, 2,50,000 pensioners are also trade union members.

In order to form a trade union, no permission from the government is required. Membership is not obligatory and members pay 1% of their earnings each month. In each enterprise there is only one union to represent the workforce.

During the special period, the trade union movement organised workers' parliaments in work places around the

country. They gave 1,67,000 suggestions on how to meet the crisis. A large number of these suggestions were incorporated into the government's plans.

## ***Education***

Cuba has a long history in education. The University of Havana was founded in 1728. In 1957 just before the Castro regime came into power, Cuba's literacy level according to the United Nations data was fourth in the region at almost 80% - higher than of Spain.

Immediately after the revolution, the government declared a 4 month closure of colleges. The "time off" was meant to be utilized for conducting literacy classes for adults. About 1,20,000 voluntary 'teachers' went out into the hinterlands, and over 7,00,000 people learned to read and write. Thus in one year Cuba attained a very high rate of literacy. Today, school attendance is compulsory from ages six to the end of basic secondary education (normally at age 15) and all students regardless of age or gender wear specified colour school uniforms as per grade levels. Higher education is provided by universities and higher pedagogical and polytechnic institutes. The Cuban Ministry of Higher Education also operates a scheme of distance education; providing an opportunity for agricultural workers in rural areas to attend regular afternoon and evening courses. Education has a strong political and ideological emphasis and students progressing to higher education are expected to have a commitment to the goals of the Cuban government. Cuba has also provided state subsidised education to a limited number of foreign nationals at the Latin American School of Medicine.

## ***Health***

Historically Cuba has ranked high in the number of medical personnel; making significant contributions to world health since the 19th century. Cubans benefit from free health care services. Primary care is available throughout the island

and infant and maternal mortality rates compare favourably with those in developed nations.

Post revolution, in the 1960s, Cuba initially experienced an overall worsening in health conditions - in terms of disease and infant mortality rates - when half its 6,000 doctors left the country. Recovery occurred by the 1980s. The Communist government asserted that universal healthcare was to be a priority in state planning. Accordingly, appropriate measures were taken in rural areas. However, following the end of Soviet subsidies in 1991 and tightening of the US embargo in 1992, medical care too suffered from severe material shortages.

Cuba has the highest doctor-to-population ratio in the world and has sent thousands of doctors to more than 40 countries around the world. According to the UN, the life expectancy in Cuba is 78.3 years (76.2 for males and 80.4 for females). This ranks Cuba 37th in the world and 3rd in the Americas, behind only Canada and Chile, and just ahead of the United States. Infant mortality in Cuba declined from 32 (infant deaths per 1,000 live births) in 1957, to 10 in 1990-95. Infant mortality in 2000-2005 was 6.1 per 1,000 live births (compared to 6.8 in the USA).

### ***Collapse of the Soviet Union and the Special Period***

Before 1989, Cuba was a model Green Revolution farm economy based on huge production units of state - owned farms and dependent on vast quantities of imported oil, chemicals and machinery to produce export crops. Under agreements with the former Soviet Union, Cuba had been an oil-driven country, and 98 percent of all its petroleum had come from the Soviet bloc. At the end of 1991, only 6 of the promised 13 m tons were received, and the short fall in oil began to severely affect the nation's economy.

While oil was critical, other losses were also important, as 85 percent of all Cuba's trade was with the Soviets. Cuba exported 66 percent of all sugar and 98 percent of its citrus

fruit to the Soviet bloc, and imported from them 66 percent of its food, 86 percent of all raw materials, and 80 percent of machinery and spare parts. Consequently, when support from the Soviet bloc was withdrawn, factories closed, food scarcity became widespread.

The collapse of the Soviet bloc and the tightened US trade embargo exposed the vulnerability of Cuba's Green Revolution and export oriented economy model. Cuba plunged into the worst food crisis in its history.

In early 1990, a survival economy was put in place as 1,00,000 tons of wheat normally obtained through barter arrangements failed to arrive and the government had to use scarce hard currency to import grain from Canada. The price of food went up and bread had to be rationed. Between 1989 and 1992, overall food consumption was said to have decreased by 20 percent in calories and 27 percent in protein. To make matters worse, Cuba's efforts to reverse the trend of rural - urban migration over the past decades failed to curtail the increasing tide of rural migrants to the cities, especially to Havana. Shortages of food and medicine and gasoline were driving people to the capital.

Cuba was faced with a dual challenge of doubling food production with half the previous inputs and with some 74 percent of its population living in cities. Yet by 1997, Cubans were eating almost as well as they did before 1989, with negligible food and agrochemical imports. Instead, Cuba concentrated on creating a more self-reliant agriculture. A combination of higher crop prices paid to farmers, agro-ecological technology, smaller production units and most importantly urban agriculture.

### ***The Cuban response***

The way Cuba responded is an inspiration to the rest of the world. It began with a nation-wide call to increase food production by restructuring agriculture. It involved converting from conventional large-scale, high input monoculture systems

to smaller scale, organic and semi-organic farming systems. The focus was on using low cost and environmentally safe inputs and relocating production closer to consumption, in order to cut down on transportation costs. Urban agriculture played a significant part in this effort.

A spontaneous decentralised movement had arisen in the cities. People responded enthusiastically to the government initiative. By 1994, more than 8,000 city farms were created in Havana alone. Front lawns of municipal buildings were dug up to grow vegetables. Offices and schools cultivated their own food. Many of the gardeners were retired men in their fifties and sixties and urban women played a much larger role in agriculture than their rural counterparts. By 1998, an estimated 5,41,000 tons of food were produced in Havana for local consumption. Food quality also improved as people had access to a greater variety of fresh fruits and vegetables. Urban gardens continued to grow and some neighbourhoods were producing as much as 30 percent of their own food. The growth of urban agriculture was largely due to the State's commitment to make unused urban and suburban land and resources available to aspiring urban farmers. The issue of land grants in the city converted hundreds of vacant spaces into food producing plots and new planning laws placed the highest land use priority on food production. Another key to success was opening farmers markets and legalising direct sales from farmers to consumers. Deregulation of prices combined with high demand for fresh produce in the cities allowed urban farmers to generate two to three times as much income as the rural professionals.

The government also encouraged gardeners through an extensive support system including extension service personnel, and horticultural groups that offered assistance and advice. Seed houses throughout the city sold seeds, gardening tools,

compost and distributed bio fertilisers and other biological control agents at low costs. New biological soil inputs and organic gardening techniques were developed and perfected by Cuba's agricultural research sector, which had already begun exploring organic alternatives to chemical controls. This enabled Cuba's urban farms to become completely organic. In fact, a new law prohibited the use of any pesticides for agricultural purposes anywhere within city limits.

The introduction of a diversified market-based system for food distribution spurred increased agricultural productivity. The United Nations Food and Agriculture Organization estimated that between 1994 and 1998, Cuba tripled the production of tubers and plantains; doubled the production of vegetables, which further doubled again in 1999. Potatoes increased from 1,88,000 tonnes in 1994 to 3,30,000 tonnes in 1998; while beans increased by 60 percent and citrus by 110 percent from 1994 to 1999. Anecdotal information suggests that thousands of families left cities and large towns to make their livelihood from the land. Other information indicates that thousands of unemployed – including rural migrants – have found employment in urban agriculture.

## ***Transport***

When oil supply stopped in 1990, transportation ground to a near halt. There were no cars running; public conveyance collapsed; and the streets were empty. People walked. Around 1993, Cuba imported 2,00,000 bicycles from China.

To begin with, trucks were converted to buses by simply welding steps to the back. A skeletal frame of rods and a canopy were added. The concept was refined into the Cuba's mass transit bus the 'Camellone' (The Camel). Built on a long chassis vehicle, it can accommodate 250 persons. For shorter distances there were cycle and auto rickshaws. In smaller towns, horse drawn or even mule drawn 'cabs' were to be spotted. Car-pooling and ride sharing is common in Cuba. There are

designated government officials in yellow uniforms who have the right to pull over even government vehicles and seat people in need of transport.

### ***Wildlife in Cuba***

One of the side effects of Cuba going organic and fossil fuel free is that wildlife in Cuba has flourished by default. Cuba has 263 protected natural areas, which cover nearly 22 percent of Cuba's territory. There are six places in Cuba added to Ramsar Convention's list of Wetlands of International Importance. Cuba is a place of unimagined biodiversity. Cuba is another Galapagos, preserved by its lack of 'development' and by the will of a people committed to conservation. Stretching for 1,200 kilometres, Cuba embraces the greatest diversity of landscapes and life in the West Indies. At 1.5 million acre the Cienaga de Zapata Biosphere Reserve is Cuba's largest protected area, designated as a Wetland of International Importance, mainly for aquatic birds. One remote and still unprotected corner of the Zapata swamp is home to more than 3,000 Cuban crocodiles, the largest remaining population of this endangered-and fierce-species.'

### ***Cuba as a fossil fuel free society***

Cuba, it would appear, is well on its way to being a fossil fuel free society. Its agriculture is primarily organic; it has rationalised its transport; and it has achieved emission standards well below the prescribed limit. Cuba also shows that a fossil fuel free society does not mean going primitive. Cuba is a modern society with access to modern science, education, health care and culture.

However, one should remember, it is still in transition. Cuba maintains the second largest army in Latin America. This, it has to, because of the presence of the USA in its backyard. A genuine fossil free society will be achieved only in a world without wars, without armies, without nuclear weapons, in short a world without borders.

From all the indications available, it is unlikely that the powerful nations will take this path without going through another war. All the investments in the capitalist world are flowing to armament industry instead of going into alternative sources of energy or organic farming! In such a scenario, Cuba still has to be on its toes to survive and is far from reaching its full potential.

### ***Reasons for Cuba's success***

In the 20<sup>th</sup> century four great revolutions occurred: The Russian, the Chinese the Vietnamese and the Cuban. Each one of them inspired millions of people all over the world in their struggle against imperialism, against injustice and against inequality. Even today, the revolutionary movement continues to learn important lessons from these revolutions. However while the Russian, the Chinese and the Vietnamese revolution moved significantly away from their socialist agenda, Cuba after 50 years still seems to continue to succeed and inspire not only the revolutionary and the socialist movement, but also a whole range of people who are involved in the environmental and green movements and who are looking towards a post fossil fuel society. What could be the reasons for this?

The main credit of course goes to the Cuban people, their organisations, their professionals and the leadership. They withstood almost half a century of hostility by the biggest imperial power next door. The hostility included not only trade embargo but also a series of attempts to assassinate their leaders, coups and even invasions. On hindsight, this hostility may appear to be a blessing in disguise. It kept the country on its toes and never allowed it to get rich and corrupt. Cuba also had a policy of allowing all those who wanted to emigrate to the US to go. This may have also helped.

There are other reasons too that explain the uniqueness of Cuba and acknowledging these can help us understand the

lessons one can learn from Cuba. These are historical; political; economic; and the high level of achievements in education and health sectors.

Latin America and Cuba experienced colonialism way back in the 16<sup>th</sup> century. Thus they were exposed to scientific and technological advances in Europe that much earlier. They got their freedom in 1898, unlike Asia and Africa where it came after the Second World War. They had free elections in 1940.

Cuba had Latin America's highest per capita consumption/use rates for meat, vegetables, cereals, automobiles, telephones and radios. Gross domestic product per capita had been approximately equal to Italy and significantly higher than that of Japan. Cuban workers enjoyed some of the highest wages in the world. Cuba attracted more immigrants primarily from Europe as a percentage of population than the US. The United Nations acknowledged Cuba for its large middle class. And finally, Cuba already had a good base in education and healthcare.

### ***Lessons from Cuba***

Cuba can provide us with a real time model for the future notwithstanding the fact that no model is ever fully or exactly replicable. There were special and unique historical and political reasons that helped Cuba to face the crisis and come out of it with flying colours.

Since many countries in Latin America share the colonial and post colonial history with Cuba. There is a greater appreciation for Cuba there. And learning lessons from it will be relatively that much easier.

For rest of the world; wherever regions share or identify with some of Cuba's features there is a greater chance of implementing these lessons. The most significant being, social awareness of exploitation and oppression; struggle for equity; tradition of democracy in society and in political parties; high level of literacy and education; awareness of environment

degradation; global warming, peak oil and its consequences; understanding the current global economic crisis and initiatives exploring alternatives to it.

In India, the West coast, particularly Kerala, coastal Karnataka and Goa have some of features similar to Cuba and may be they will be able to face the current crisis better. West Bengal, in spite of CPI (M)'s present unfortunate policies, may eventually emerge to play a significant role. But no one can predict the future with a decent degree of accuracy - it always has a store of surprises.

### ***Resources***

For more material and references the following will be useful.

1. Parchure, Manohar *Cuba is organic by default: India can be organic by design*, Nagpur
2. Mansata, Bharat. *Organic Revolution! The Agricultural Transformation of Cuba since 1990*, 2008, Kolkatta, Earthcare.
3. SIS Press Release 21/01/08. *Organic Cuba Without Fossil Fuels*.
4. <http://en.wikipedia.org/wiki/Cuba>
5. Steve Winter, National Geographic Magazine, November 2003
6. "Power of Community" (50 minutes) How Cuba got over the Peak Oil Crisis. (Film)

Email: [t.vijayendra@gmail.com](mailto:t.vijayendra@gmail.com)

Blog: [t-vijayendra.blogspot.com](http://t-vijayendra.blogspot.com)

Mobile: +91 94907 05634

# **Cuba Without ISMS**

*Road to a fossil fuel free society*

**T. Vijayendra**

Published: August, 2012

*(Revised version of Chapter with same name from the  
book 'Regaining Paradise' by the author)*

Copies: 1000

**Price: Rs 5/-**

**Jana Vignana Vedika**

**G. Malyadri**

Convenor, Publications Wing

162, Vijayalakshmi Nagar, Nellore - 524 004.

Phone: 94405 03061

Printed :

Charita Impressions  
Azamabad, Hyderabad.

Ph : 040-27678411.