

# *Of Peak Oil and Urban Initiatives*

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Peak Oil has arrived! That is, the world production of petroleum has reached its peak and it has started declining. Hence the rise in not only petrol and diesel prices but a generalised inflation all over the world. What will happen in next 20 years depends on humanity's response to this crisis.

In tackling problems arising out of Peak Oil urban areas are more important because they consume bulk of the energy from fossil fuels. They do so because they are centres of power. There are various forms of power. Thus: (a) Political power, (b) Judiciary, (c) Police and jails, (d) Presence of army in bigger cities, (e) Economic power: production, trade centres, banks, finances, accounting firms and so on. (f) Centres of higher education and culture. Demands in rural areas are influenced by trends in urban areas. Also within urban agglomerates demands in smaller cities are influenced by bigger cities. Consequently reduced demands in urban areas will have a spill-over effect.

India has an urban population of 300 million, greater than the population of USA or for that matter greater than any country except China. They live in a total of 400 urban agglomerates. 180 million people live in 35 cities that have a population greater than a million. The three metros, Mumbai, Kolkata and Delhi have more than 10 million whereas Hyderabad and Bengaluru have more than 5 million. In a sense it will be easier to tackle the problems of 120 million people who live in 365 urban agglomerates of less than one million population and many of the success stories will first come from them. On the other hand many groups and individuals in bigger cities are more aware and have resources to start alternatives and can help the groups in smaller towns.

In urban areas individualism or alienation is very significant. People are used to be on their own and not relating with their neighbours. Any solution to the urban problems will have to tackle this issue first.

Capitalism breeds capitalist individualism and breaks down communities. What is capitalist individualism? It is the belief that one is free if one has money in one's pocket to spend as one likes. The more money you have, the more freedom you have! However this very money is obtained through jobs, which implies wage slavery. So at one level this freedom is mythical. At another level, historically it meant getting out of the oppressive bondage of a caste system or a patriarchal family. So it did mean freedom. Thus the growth of capitalist individualism and the breaking down of the communities are one and the same process. The democratic state also aids the process of breaking down communities through promises of a welfare state and through killing traditions of self-management of local issues.

The real freedom is to get out of wage slavery and feudal bondage. On the other hand the human species is a social species. How to combine the urge to freedom with the need to be part of a community? It cannot be done by going to the past and building the community on the basis of caste, as Gandhi tried to do. This can be done by disengaging with capital and the state and rebuilding the

community on the basis of a free association of free people. What does it mean in practice and where and how does one begin?

The basis of one's freedom is respecting other person's freedom. Respecting, loving and caring for the other is the basic principle on which a free association can be built. So people should get to know each other directly, be they poor or rich, of their own caste/class or of another. But history and world views, inhibit this. Learning to accommodate diversity will be the basis of building community. In urban areas there is a horrifyingly stupendous waste of food because things come easily to them. People in urban areas do not produce food. Otherwise they would have known better. Urban people should reduce their consumption systematically and incrementally.

Concrete projects are not just technological fixes of public transport versus private, separating solid waste at source, urban gardening, changing incandescent bulbs to CFL bulbs etc. They will all require rebuilding the community and that can be done mainly through local associations and trade unions. In most of these initiatives, the size of the community should be on human scale, say, a population of 10,000 or so.

In urban areas children have lost their childhood, particularly in metropolitan situations. They are engulfed in the vicious circle of school, tuition, and consumerism promoted by TV channels and peer-group pressures. Organising children's groups play and library at a local level is a very important activity. As far as possible, children should be encouraged to go to local schools so as to cut precious travel time and save transport costs and fossil fuels.

Organising children's Eco-clubs, either at the school or in the locality, can be very important. Children are receptive to new ideas and some of the local initiatives described below can be started at these clubs.

## **WASTE DISPOSAL AND GARDENS**

The urban situation implies separation of people from the land. The nutrients are transported away from the crops and farms where they originated, and accumulate as waste product in the cities, depleting the soil. Urban waste disposal methods thus cut at the very root of the nitrogen cycle by not allowing the biodegradable waste (the nutrients of the soil) to go back to the soil. Hence, separation of biodegradable waste at the source and composting at an individual or community level is an absolute must. Related issues are rainwater harvesting and urban vegetable gardens. This will reduce transport costs, (both in transporting waste to dumps outside the city disposal and bringing vegetable to town) provide fresh food, and consume the compost produced locally. This takes care of nearly 70 percent of the waste. The remaining waste, metal, glass, plastics, etc. can go to recycling more easily and in greater quantities because it is already separated.

## **FUEL**

Almost all domestic fuel consumed in cities today is of fossil fuel origin. With the cost of cooking gas and kerosene slowly going up, people will be forced to move to

wood fuels. Where is the wood fuel? Forests are already under great stress. The only solution is to grow fuel wood within the city. Now unless it is started right now it will not be ready when the crisis deepens because trees take time to grow. Secondly solar box cookers/ovens can save at-least half the total cooking fuel.

## **TRANSPORT**

Transport of course is the biggest fossil fuel guzzler today. There still remains general inner-city transport and in big cities two wheelers, cars, auto rickshaws create terrible problems of road accidents and air pollution. Recent rises in fuel prices are putting great pressures on two and three wheelers because they are used by relatively lower income groups. Many auto drivers feel that the days of autos are numbered and that cycle rickshaw will come back. Most probably there will be a phase of share autos before they will get phased out. Similarly for two wheelers they probably will go through a phase of battery operated Luna style minis or bicycles. It will all happen first in smaller towns and then in bigger cities. Small towns with distances of 5 km or so don't need any fossil fuel vehicles. It is just aping the big cities and expression of power. They can easily launch on the path of becoming fossil fuel free cities straightaway.

Improved cycle rickshaws-lighter and with gears-have been around for some time. In Delhi, Chandigarh, Agra, Mathura and Jaipur several lakhs are plying. In Maharashtra there is a design in which the rickshaw puller can rearrange the seat and convert it into a bed!

For the bigger cities there will have to be a more comfortable and rational urban public transport system. It is a political battle which many civil society groups are waging. Meanwhile local groups can take initiative in use of cycles and bringing back the cycle rickshaws, particularly in the outlying areas.

## **WATER**

The size of any human settlement is determined by the amount of water available. Today almost all the million plus cities and many smaller cities are dependent on water being brought from a distant river or lake. In many cases this was required not only because increase in population, but also due to polluting the existing source. There will definitely be conflict over the issues in future. The aim should be that every human settlement is self sufficient in water resources. Two initiatives are possible: 1. Water harvesting at roofs of individual buildings. 2. Cleaning up the existing resource to make it potable. It will require, mainly diverting the polluting source.

## **HEALTH CARE**

Urban lifestyles, pollution, and chemical addiction (narcotics, tobacco, and alcohol) have created severe health problems. Privatisation of health care, particularly corporatisation, has made it the biggest direct exploiter of the people. Pediatric and geriatric health care are particularly prone to exploitation as they

involve the emotions of people. There is an urgent need to initiate community-based people's health care groups whose aims can be:

1. To move towards informed selfcare.
2. To promote healthy lifestyles and preventive health care.
3. To provide professional care service through a trained family physician.

### **CONSUMER CO-OPERATIVES**

Urban life is dominated by irrational consumerism and choices in the market that are not easy to discern. So the basis of the local shop should be a limited choice of reliable products in terms of quality and price. This will reduce inventories and save money both for the shop keeper and the consumer. The shop can be kept by anyone in the community or can be run by a society. A committed membership helps in bulk purchases. The community can also work with one village for bulk purchase of organic products.

In rebuilding the community the need of the poorest comes first. While charity may be needed initially to overcome hunger and starvation, the long term solution is to create new jobs within the community, such as gardeners and compost makers, cycle rickshaw drivers and repair people, local crèches, local bakeries, community service centres for plumbing, carpentry, masons, tailor, general repair and maintenance shops etc. The goal should be that basic securities of shelter, food, fuel, education of children and health care should be available to all irrespective of income within the community and with the community resources.

### **GET STARTED**

One should begin with oneself and start implementing some of the ideas within one's own control. For example, using bicycles, segregating waste at source, buying a solar cooker, planting a tree etc. Then one should start forming a group. The first thing is to expose the group to the full nature of Peak Oil. Then one can start planning activities within the resources of the group. The aim should be to work within the resources of the micro community one is part of. Federal links and mutual support with similar neighbourhood groups will come later. As soon as possible members of the group should join associations and trade unions within the community as well as become members of the existing city groups such as bird society, snake club, horticultural society, environmental groups and so on. This will give access to vital resources within the city.

### **CUBAN EXPERIENCE**

Cuba is where agriculture without fossil fuels has been put to its greatest test, and it has passed with flying colours. The year 1989 ushered in the "Special Period". In 1989, the collapse of the Soviet bloc and the tightened US trade embargo exposed the vulnerability of Cuba's Green Revolution model, and it was plunged into the worst food crisis in its history. Cuba was faced with a dual challenge of doubling food production with half the previous inputs, 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 little food and agrochemicals imported.

A spontaneous, decentralised movement had arisen in the cities. People responded enthusiastically to government initiative. By 1994, more than 8000 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. By 1998, an estimated 541000 tons of food were produced in Havana for local consumption. Food quality has 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.

Many of the gardeners were retired men aged 50s and 60s, and urban women played a much larger role in agriculture than their rural counterparts. Gardeners come from all walks of life: artists, doctors, and teachers. Fernando Morel, president of the Cuban Association of Agronomists said: "It's amazing. When we had more resources in the 80s, oil and everything, the system was less efficient than it is today." The City of Havana now produces enough food for each resident to receive a daily serving of 280 gm of fruits and vegetables a day. The UN food programmes recommends 305 gm.

Urban agriculture nationwide reduces the dependence of urban populations on rural produce. There are over 104000 small plots, patios and popular gardens, very small parcels of land covering an area of over 3600 ha, producing more than the organoponicos and intensive gardens combined. There are also self-provisioning farms around factories, offices and business, more than 300 in Havana alone. Large quantities of vegetables, root crops, grains, and fruits are produced, as well as milk, meat, fish, eggs and herbs. In addition, suburban farms are intensively cultivated. Shaded cultivation and Apartment-style production allow year-round cultivation. Cultivation is also done with diverse soil substrate and nutrient solutions, mini-planting beds, small containers, balconies, roofs, etc. with minimal use of soil. Production levels of vegetables have double or tripled every year since 1994, and urban gardens now produce about 60 percent of all vegetables consumed in Cuba.

The success of urban agriculture is put down to the average Cuban citizen's commitment to the ideal of local food production. There is so much for the world to learn from the Cuban experience, not least of which, agriculture without fossil fuels is not only possible but also highly productive and health promoting in more ways than one.

#### **Notes and References :**

1. Peak Oil : <http://www.peakoilhasarrived.com/>. This is an Indian site with very good links.
2. Many of the ideas discussed above originated in the garden city movement in the early twentieth century. In the Indian context city urban planning exercises carried out by Patrick Geddes in the 1920s give a good historic perspective.' 'Patrick Geddes in India'. 2007, Select Books, 71, Brigade Road Cross, Bangalore 560 001. Price:Rs.250/-
3. Urban Garden: A good place to start would be to contact 'The Horticulture Society' in the city.
4. Solar Cooker : [http://en.wikipedia.org/wiki/Solar\\_cooker](http://en.wikipedia.org/wiki/Solar_cooker). This is a good starting point. The box solar cooker is probably the safest and cheapest.
5. Improved Cycle Rickshaw : [http://www.itdp.org/index.php/projects/detail/india\\_rickshaw\\_modern/](http://www.itdp.org/index.php/projects/detail/india_rickshaw_modern/)

<http://www.eco-web.com/editorial/06554.html>

6. Consumer co-operatives: [http://en.wikipedia.org/wiki/Consumers'\\_cooperative](http://en.wikipedia.org/wiki/Consumers'_cooperative). See the section on Japan.
7. Cuba : <http://www.i-sis.org.uk/OrganicCubawithoutFossilFuels.php>
  8. On the net if one types out 'Post carbon cities' 'relocalisation', 'solar box cookers', 'improved cycle rickshaw' 'urban gardens', 'Cuba' etc. there will appear lot more information about these groups and resources.