Lessons for California and the U.S. from movie "How Cuba survived Peak Oil"

Contributed by Alice Friedemann
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After seeing the film The Power of Community: How Cuba survived Peak Oil at a San Francisco Oil Awareness meeting in May, I thought about how those lessons might apply to California Agriculture. California grows about one-third of the U.S. food supply.

Much of what follows is based on the excellent Oxfam analysis of the complexities involved in Cuba and its food production reforms.

(see
http://www.oxfamamerica.org/newsandpublications/publications/research_reports/art1164.html/?searchterm=cuba

Just as Robert Hirsch of SAIC advised the U.S. Dept. of Energy that we ought to prepare for peak oil at least a decade ahead of time, so too should social values and our economic structure be altered well ahead of peak.

Social Factors

Before 1959, the United States owned 40% of Cuba's sugar production, 90% of the utilities, oil refineries and mines, and some of the banks.

The Cuban revolution powerfully motivated people to overcome United States domination and become self-sufficient. People were willing to make large personal sacrifices for the public good. The energy crisis took place within this social framework.

As times get harder in the United States on the down-slope of Hubbert's curve, our Lotto-driven, "Who Wants to be a Millionaire?" society will need to be convinced to work for the greater good. Dmitri Orlov's three-part "Post-Soviet lessons" (fromthewilderness.com)
describes the problems our culture has that will make this difficult for us.

There's some hope -- 29% of Americans are volunteers. A campaign to get the other 71% volunteering would be a good start for preparing society for what lies ahead, plus keep people busy as their jobs disappear.

Economic structure

The disparity of wealth in America is likely to lead to a lot of social unrest as times get harder. Adjustment to peak oil would go more smoothly if wealth were more fairly distributed, but the only way this could possibly happen is to institute the reforms suggested in Joel Bakan's book, The Corporation: The Pathological Pursuit of Profit and Power.

Land Reform

In Cuba before 1959, eight percent of the farmers owned 70% of the land. The revolution redistributed the land to the farmers.

California is, and always has been, a state with very large farms. It is unlikely the land will be redistributed here. [Voluntarily, anyway - ed.] California's past and present is most likely its future: brutal exploitation of labor (Richard Street "Beasts of the Field").

Also, California has the largest and most elaborate water distribution and irrigation system in the world, and these large waterworks function best in a centralized and highly controlled manner, which also does not lend itself well to land redistribution.

Percent of population doing Agricultural work

As energy declines, we can allocate more and more scarce energy to agriculture, but at some point a proportional number of people and animals must go back to the land to make up for the lost energy - ultimately 90% of us.

Cuba was fortunate to already have at least 15% of their population living rurally (the CIA fact book says 21% are agricultural workers now). Although the Oxfam report and movie don't say anything about this, I imagine that this meant a much larger percent of urban dwellers had some connection to the land and potential food aid from their relatives who worked on farms than the average Californian has.

But less than one percent of our population are agricultural workers -- 834,000 according to www.bls.gov -- and that number is expected to drop.

Cuban Agricultural Research and Extension

Cuba had already started sustainable agriculture programs and research many years before the crisis hit. This allowed them to quickly get information to farmers and city dwellers and train them to grow food organically. A campaign to breed oxen and train young farmers in how to use them was quickly put in place.

The United States started spending a large amount of money on agricultural research starting in the 1850's, and the bills that started agricultural colleges and the department of agriculture state quite clearly that this money is to be used to aid the small farmer.

But that intention was corrupted almost from the first day by larger farmers quickly taking advantage of the research at nearby colleges. Nearly 100% of college and USDA funding now goes towards industrializing and mechanizing agriculture. (Jim Hightower, Hard Tomatoes, Hard Times).

Californians need to allocate far more resources to the University of California SAREP (Sustainable Agriculture Research and Education Program), which has a skeleton staff of ten people and almost no funding for research. They have a good statement of what sustainable agriculture is at

www.sarep.ucdavis.edu.
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Climate & Water

Cuba's temperature ranges between 68 and 81 degrees F, and they get almost 50 inches of rain per year, over the entire year. That allows them to grow crops year round.

California is cursed with a Mediterranean climate, where there's no rain during the height of the growing season. This is gotten around with elaborate irrigation systems, and in the warmest part of the state it's possible to grow crops year round.

The USA devotes about seven percent of its energy to provide water services. See www.iags.org.

In California, the water table has dropped significantly, requiring energy to pump water beyond what windmills can provide. As energy declines, that will impact water availability and decrease crop production.

California is also likely to have severe water shortages in the future. There is already competition between agriculture and the 36 million residents of the state for water. Worse yet, all global warming models for California show significant water problems from drought, early snow melt and disappearing glaciers (reservoirs in the sky) and extreme flooding, which will greatly reduce the amount of food that can be grown here.

Urban Food and Agriculture

Our most fertile land, the peat soils in the delta region, can not be saved from hydrostatic forces, earthquakes, severe floods, and rising sea levels, no matter how much money is spent (Thad Bettner www.lib.berkeley.edu/

). This is bad news for the Bay Area; our best hopes for food in an energy crisis would be to have food shipped from the Delta to the greater bay area.

In 2000 food purchases took up 66% of the average Cuban salary, because the food rations did not cover all of the food people needed. High prices were partly due to a shortage of trucks to haul produce from the country to the city - the few people who had trucks charged vendors and consumers a lot of money and paid the farmer very little. The Cubans got around this problem by donating trucks and fuel to the agricultural cooperatives to eliminate middlemen. We should plan ahead of time how to eliminate the middle man here as well.

Given our capitalistic system, and the current lion's share of profit going to middlemen rather than farmers, I'm not confident this will happen.

Cuban urban dwellers can receive up to one-third of an acre for a personal lot in the periphery of the major cities. Doing the same for Bay Area residents would mean most of us would need to commute 30 to 100 miles to reach our little plot of land since we are so densely and massively urbanized.

I have other issues with growing food in the Oakland urban environment as well:
www.energyskeptic.com (See the Oakland Depletion Protocol document in section #3.)

Conclusion

Just as Cuba had a sudden energy crisis, so too are we likely to have many crises from energy shocks in the future from wars, hurricanes, terrorism, revolutions, and potential five to eight percent world-wide oil depletion rates. There will also be hiccups in global trade delivery of oil and LNG.

We can get more efficient and sacrifice resources to agriculture, water services, and the trucking industry, but as geological depletion relentlessly continues, as global warming and extreme weather greatly reduce agricultural production, and as the ten high plains states above the Ogallala reservoir run out of water or the energy to pump it up from hundreds of feet down, we will face a food crisis.

We would be better prepared for that if we started programs now to get large numbers of people to go back to the land. There is no way we can continue to have just one percent of the population providing half of the food for the other 99%. (we import the other half: Larry Rohter. Dec 12, 2004. South America Seeks to Fill the World's Table. New York Times).

We should plan an orderly retreat. This would be done by relentlessly cutting back on our energy use more than the depletion rate so that we stay under the energy curve. Universities would shift from industrial and mechanical agricultural research to providing sustainable agriculture outreach to small farms and collectives. However unpleasant this sounds, the alternatives are chaos, starvation, Rwandan-style lowering of the population, the complete loss of Democracy to fascist leaders who will step in to try to regain stability, and the potential invasion of our country by other nations taking advantage of our weakness.

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