

Short Paper for Ecocity World Summit

*Richard Register, conference co-convener, has written short essays to augment his talks at the Seventh International Ecocity Conference. These do not follow the particular words of the talks as the talks are from notes, not scripts. The short essays are designed to encapsulate some of the more important thoughts. This one goes along with his contribution to the evening with photographer Gary Braasch, chronicler of climate change for planet Earth. The Title for the evening: **World View of Global Warming – How Cities can Save the Earth**, Monday, April 21, first event of the Ecocity World Summit, San Francisco, April 21-26, 2008.*

Earth Day Eve with Gary Braasch – Ecocities and Global Heating

There's a triple crisis going on, like three immense tsunamis careening together: global heating, end of cheap energy and species extinctions world wide – and all at the same time. Gary Braasch has been fanatically photographing climate change like a Paul Revere with camera while meantime some of us have been looking at the largest creation of humanity and puzzling why no one connects THAT with the largest problems swamping us.

Ecocity solutions are nothing new, though few are acquainted with them. I've been working on them since I met Paolo Soleri in 1965 – 43 years ago – he for longer and others too. But things are heating up. The planet has a well-recognized fever now, getting worse. The wake up call from Al Gore and our very own conference speaker, climate scientist Stephen Schneider, is getting some results. People are finally opening their eyes to the fact that something has gone wrong and that we need green cities. The linkage isn't clear in many minds yet and even the architects of green buildings are generally lite on green cities, to say the least. Generally they are helping to build good buildings in bad locations, in bad

relation to other buildings, transit, bicycles and public, natural and agricultural open spaces. But if we get it right with the largest creations of our species – cities – that could go a long, long way toward reversing global heating, conserving energy while supporting benign renewable energy technologies such as wind and solar, and preserving what is left of biodiversity. Could we really save the Earth by building a different kind of city? How to do that?

First recognize that about 100 years ago we took a fork in the road. We began designing cities for cars, not people. This was due mainly to the discovery of what was then called “mineral oil,” that is, petroleum. Quickly it was evident that oil was an enormously powerful, plentiful and convenient energy source. It could be used in machines to replace animal powered vehicles – at enormously higher power. Rapidly things began to change. Oil could be used for countless other things it turned out, too. In a way, you can't blame people for taking the high-powered adventure that also brought many services of real value along with it. But it did pump up world population several times over, spread out cities and initiate such profligate consumption as to now threaten literally *all* the balances on our planet: life, soils, aquifers, rivers, oceans, weather, climate – everything.

Now with cities responsible for the lion's share of the Triple Crisis, it's time to wake up to that as well as one component of the whole pattern, climate change. The moment is now. And it starts with us – finally – getting a sense of proportions:

The car is 30 times as heavy as the human being. If you, like me, have a hard time getting a sense of proportion, look at your outspread fingers. That's ten. Then spread them out three times. Now look at just one finger. You begin to grasp that, as a design criteria for cities, the car could get a little overbearing. And that's just the start. They move at 10 times the speed. They take up 70 times the volume – standing still and much more when moving. Meantime only about one in nine people on this planet own one, though many dream of prosperity of a type where everyone can own one. Not when they in their relatively small numbers – compare one to nine fingers – already do most of the damage.

But let's look beyond the car and the kind of city it created to some other things going on now:

- Food prices world wide 40% higher in April 2008 than in April 2007, accompanied by food riots from Haiti to Senegal, Pakistan to Thailand
- \$115 a barrel oil this week, doubled in one year
- Airlines going bankrupt because of high fuel prices
- Economists saying in two years we will be out of this downturn that started with a little excessive greed in the real estate market - we'll make the adjustment, fly right and go on our usual way by 2009 or 2010
- Katrina

What do all these things have in common? They are connected by way of the kind of city we build.

"It is clear now that producing fuels from food crops, or from ground that can be cultivated for food crops, or from palm oil plantations in cleared rainforests, is neither environmentally nor socially responsible. Biofuels advocates must now look to "second-generation" feedstocks such as algae, crops grown on land not suitable for normal agriculture, and cellulosic technology, which can be applied to non-food crops such as grasses and waste products such as food scraps and grain crop stubbles." (www.petroleumnes.net)

This quote sounds intelligent enough, but, first, there is no sense of proportionality. There is no way the inefficient, expensive building and operating of high energy input constructed algae ponds can replace naturally occurring, good old flat, gritty, loamy land. Using drier grasslands not currently in cultivation? How? Only by pumping water already in high demand from other places and uses. To power the absolutely massive demands of the car that weighs 30 times as much as a human and its entire asphalt united scattering of low-density city...? You get the idea. Comparing the hundreds of feet thick deposits of highly concentrated energy in oil cooked up by the biology and geology of the planet over 150 million years with what can be delivered from a paper-thin layer of chlorophyll is comparing a flood to a trickle. Proportionality please!

Katrina, juiced up on CO2 from the very sprawl that characterizes about 90% of New Orleans' own land area was a catastrophe caused largely by the way we build. Did they learn anything there, as people are constantly saying it will take a disaster to wake us up? No! They are trying to build it back in the same car dependent form, despite the fact that they have a much appreciated streetcar system there and the compact, dense and diverse pedestrian model called the French Quarter on high ground. Answer: as the Indians did up and down the Mississippi for 500 years before the whites came, build on elevated artificial fill for the person, not the car.

Airlines going bankrupt as oil climbs over \$115 a barrel? Well, that connection is clear enough, but the idea that somehow we will get back to normal by 2009 or 2010 is strictly delusional. We are not dealing with a little excess greed that can be adjusted with the moral wag of the finger. Right now energy shortages are rolling across the world and people in, among many places, South Africa where the situation is particularly severe, are blaming the government for building up urban and industrial infrastructure without planning for enough power plants. But the fuel is getting much more expensive. The reality is that we are burning oil at nine times the rate we are discovering new deposits, the Chinese are building highways like gangbusters, the Indians just unveiled the Tata Nano, a small car that everyone can have while their population heads father and farther beyond the billion mark and Americans are still insisting on more cars and highway projects.

What is really happening is that we are finally slamming up against the limits of the planet to supply so many people demanding so much and living in the worst possible, energy squandering design imaginable.

Ecological pedestrian city design is not the whole answer. It's part of a whole system of interlinked things - energy systems, soil and sheer surface area of the earth, solar energy captured by plants, family planning policy, willingness to invest in the future generously (pay taxes and tax the rich) so we can build the benign renewable energy systems like wind and solar, rail and bicycle - not car systems - and rethink our architecture. But

if we get that right, if we build the ecocity instead of the city of, by and for cars, we are well on our way to saving the Earth and even closer to learning how all those other things can connect in a healthy design. Then our civilization has some change of enduring.

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