

Sustainable (& survivable) Communities

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What do we need to plan for?

The coming times of cascading change

Coming Times of Cascading Change

- Markers of Change
 - Global economic collapse
 - Mass extinctions
 - Climate Change
 - Peak Oil
 - Soil Depletion
 - Population Overshoot
 - Food Shortages
 - Failed States
 - Epidemics

Global Economic Collapse

- Credit Default Swaps
 - \$681 Trillion in derivatives trades in 2007 – 10 times the GDP of all countries... SOMEONE IS BLUFFING!!
 - Free Market might be a good idea if we ever tried it.
 - Naomi Klein – The Shock Doctrine
 - Bear Sterns Collapse Hooked to JP Morgan-Citibank Trust
 - Unregulated markets – Enron, Wall Street Ponzi Scheme

Stages of Collapse (Orlov)

- Financial markets – Future no longer resemble the past, Faith in business as usual is lost. Financial institutions become insolvent, access to capital is lost
- Commercial, Retail and service economy- Money is devalued, commodities are hoarded. Retail chains breakdown. Faith in “the market shall provide” is lost
- Political Collapse – Breakdown of confidence in government – Survival necessities are hard to come by. Faith in “the government will take care of me” is lost
- Social collapse – Faith in “my people will take care of me” is lost,
- Cultural collapse – Faith in the goodness of humanity is lost. Families disband, everyone for themselves. Mantra – “may you die today so I can die tomorrow (Solzhenitsyn)

Local Economies

- Re-localize your economy
- Know who you are dealing with & establish personal relationships with local businesses
- If you can, establish a local bank, or deal with one rather than large chain banks.
- Know your Farmer! Consider CSA's
- Grow your own!
- Meet your meat maker and cut down on meat

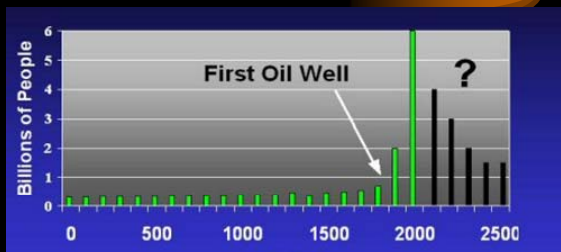
Localizing economies

- Own tools
- List your skill sets and include hobbies
 - Musician, mechanic, health care, diet, know it all, artisan, builder, designer, scrounger, gardener, etc
- Begin trading services rather than paying cash
- Figure out what is close enough to walk or bike to when you need it.
- What about guns, gold, and gluttonous hoarding?

Population Overshoot

- Population stable for 2000 years - Less than 500 million people
- Cheap energy brought rapid increase in population
- Fertilizer in agriculture started green revolution
- Population 6.5 billion today
- Could be 8+ billion by 2020
- What is the carrying capacity of earth under sustainable conditions? Maybe 1.5-3 billion people.

World Population - Perspective



• Sustainability Explained

Pat Murphy, Community Service Yellow Springs OH

*Build resiliency into your home,
your friends, your community, and
your local economy.*

*Building more people is not going to
solve our problems*

Soil Depletion

- Evidence fruits and vegetables have fewer minerals than 20 years ago
- Results from over tillage and overuse of synthetic fertilizers
- Erosion through wind and rain
- Great plains have lost half of the original topsoil in 150 yrs
- Has lost trace elements like boron, zinc manganese, iron and others
- Synthetic nitrogen in run-off causes dead zones in river deltas

Soil Depletion

- Civilizations collapse when soil is depleted beyond the carrying capacity of the land
 - Sumaria, Aztec, Inca, Toltec, Easter Island
- 70% of grains grown in the US are fed to livestock
- 40-60 million people die each year from hunger
- Topsoil erosion and desertification occur from running stock on the land
- 70% of western US water is used for livestock feed
- 10-80 calories of fossil fuel is used to produce 1 calorie of food

Returning the soil

- Compost
- Crop rotations
- Grow more food crops, less livestock –direct use!
- Reduce meat consumption
- Plant trees
- Reduce tillage
- Permaculture
- Zeriscape

Water Shortages

- Global in Nature
- Crop and food reductions
- Water use restrictions
- 40% of world food comes from irrigated cropland
- Less than half the water reaches the roots
- Most irrigation based civilizations fail historically
- Water tables dropping
- Salt build up causes collapse

Water efficiency and conservation

- Reuse water for low flow toilets
- Short showers with low flow heads
- Rain barrels for plants
- Drinking water in refrigerator to cool
- Compost rather than garbage disposal
- Full loads in dishwasher and washing machine
- Commercial car wash using recycled water
- Repair leaks wherever they occur



Mass Extinctions

- Five previous extinctions
 - 440 million years ago (MYA) 25% species loss – climate cooling
 - 320 MYA – 19% species loss – climate change
 - 245 MYA – Tectonic shifts 54% species loss
 - 210 MYA – No known cause 23% species loss
 - 65 MYA – End of Jurassic and dinosaurs 17% loss
- Sixth mass extinction is happening now
 - Anthropomorphic causes (people)
 - Transformed landscapes – loss of habitat
 - Over-exploitation of species
 - Pollution

Mass Extinctions

- Create habitat where ever possible
- Don't destroy habitat
- Find ways to connect habitat
- Build green roofs
- Use permaculture rather than agriculture
- Keep dogs and cats under control to prevent predation
- Keep other humans under control to prevent predation

Climate Change

- Arctic and Antarctic warming
- Ice melt and rising sea levels - up tp 6 meter rise?
 - Polar bear and walrus in danger from melting ice
 - Alaskan villages threatened by lack of sea ice and erosion
 - Melting permafrost drunken forests – release of CO2 and Methane
- Greenland and Western Antarctic ice sheets
- CO2 absorption by oceans – increase in acidification
- Interruption of global ocean currents – Gulf stream stops?

Climate Change mitigation

- Reduce energy use
- Reduce CO2 emissions
- Eat less meat
- Grow more food
- Drive less, and more efficiently
- Choose renewable energy when possible
- Step it up for climate change mitigation



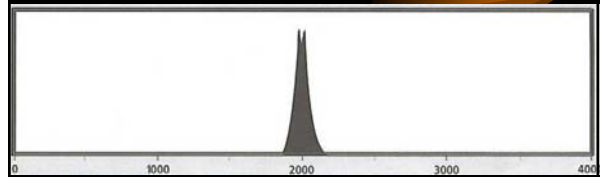
Food Shortages

- Food riots erupting in all major regions of the world
- Ethanol production in US results in increased demand of corn – causing rising grain prices worldwide
- Food prices have risen 40% in the past year
- Costco rice restrictions
- Use of grains for raising meat

Peak Oil – The end of cheap energy

- Peak oil means peak of production – Never more than now?
- Occurs about halfway through the recoverable oil
- Looking at conventional reserves
- Remaining reserves are heavier, more sulfurous, in deeper water, in smaller fields deeper into the earth
- Production has remained flat since May 2005, while prices have tripled.
- The end of cheap energy

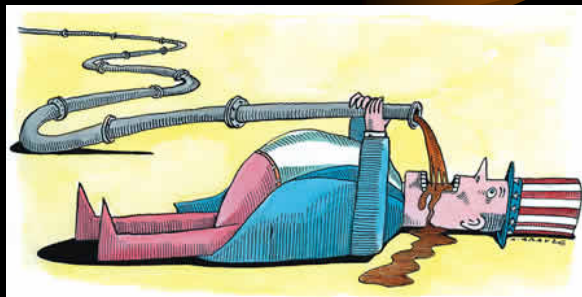
Fossil Fuels are a finite resource



They will peak at some point, and eventually not be useful on the scale they are today.

We will never completely run out of fossil fuels

150 YEARS OF ADDICTION



Epidemics and Health

- H5N1 – Avian flu – is in the process of mutating
 - 15 known varieties – if it merges with human strains of flu, global death toll could be 50 million
 - 164 Asian deaths to date (Times online Feb 4, 2006)
 - Not currently in the US but confluence of Asian, middle eastern, European birds migrate to Alaska and Canada
- Anti-biotic resistant bacteria
 - Tuberculosis
 - Staph and strep infections

Survival items

- At least 3 months (preferably 1 yr) supply of food for each person
 - Dry and canned goods, no fresh meat
 - Functioning still or boil and re-condense water
 - Alcohol for sanitation, along with Tincture of Iodine, bleach and salt for purifying water.
 - First aid supplies, meds, analgesics
 - Fuel, candles, batteries, topped off gas tanks and propane tanks, solar panels and firewood
 - Solar ovens

Security

- Increase in failed states
 - Somalia, Sudan, Haiti, Myanmar, Former Yugoslavia and some soviet states
- Where is the oil?
 - Middle east
 - Mexico-Canada-Venezuela-Bolivia
 - Russia and the Stans...
 - Deep sea

Sustainable (& survivable) Communities

- Redefine prosperity
 - weighing quality of life, community character, and the environment alongside economic considerations
- Seek true development
 - getting better, instead of merely getting bigger
- Ensure long-term stewardship of community resources
 - acting today in ways that don't erode the basis for future prosperity
- Pursue self-reliance and inclusion of neighbors

Sustainable Communities

- Foster democratic decision-making
 - representing community-wide interests over those of an elite few
- Stress diversity, inclusion and resilience
- Pursue many small efforts instead of a single one-size-fits-all solution

Guidelines for Sustainable Development

- Use renewable resources no faster than they can be renewed
- Use non-renewable resources understanding that someday a renewable substitute will be required
- Seek ways to strengthen the economy without increasing "throughput"
- Focus more on getting better, less on getting bigger
- Seek development that increases diversity and self-reliance
- Put waste to work

Guidelines for Sustainable Development

- Regard quality of life as an essential asset
- Consider the effects of today's decisions on future generations
- Consider the off-site effects of decisions
- Consider the cumulative effects of a series of decisions
- Measure whether actions actually do what they were intended to do
- *Depleting natural resources (natural capital) is comparable to operating the economy as if it were a business in liquidation*

Growth Includes two very different aspects that often occur separately

- EXPANSION
 - Bigger
 - More
 - people
 - buildings
 - subdivisions
 - outlet stores
 - Use more resources
 - Increase “throughput” (the flow of materials that are processed, used, and turned into waste)
- DEVELOPMENT
 - Better
 - More
 - income
 - jobs
 - savings
 - Use resources more efficiently

Plug the Leaks

- Creates new jobs, income, and savings without physical expansion
- Improves comparative advantage
- Increases resilience - makes the community a little less vulnerable to external economic fluctuations
- Creates stronger trading partners in national economy

Plug the Leaks

- Resource efficiency
 - Osage, Iowa
- Import replacement
 - Tropic, Utah
- Local currency
 - Ithaca, New York

Osage, Iowa

- Population: 3,800
- Energy-efficiency program
 - from 1974 to 1991, plowed \$7.8 million back into local economy
 - 1995 electric rates 50% below state average
 - saved money filters back into the local economy
- Plugging leaks (principle #1) also supports local businesses
 - (principle #2) Fox River Mills cut production costs 29%, enabling it to triple jobs

Osage, Iowa

- Utilities can increase profit by paying customers to use less electricity
- *Typical community spends more than 20% of its gross income on energy; 80% of those dollars immediately leave the local area*

Eugene, Oregon

- Asked 10 businesses to list items purchased out of state
- Called local businesses to bid on the items
- Created 100 jobs and \$2.5 million in new contracts in the first year
- Isolationism?
- No, makes the town a stronger national trading partner
- Creates market efficiencies
- Improves town's comparative advantage

Support Existing Businesses

- Strengthening businesses is easier than starting new ones
- Also creates new jobs, income, and savings without expansion
- Community-supported agriculture
 - River & Sarah Bean, Palmer AK
- Buy-local programs
 - Made in Alaska
- Community land trusts
 - Borealis Community Land Trust

Support Existing Businesses

- Flexible manufacturing networks
 - Fisheries – canneries – fish oil
- Community development corporations
 - 2,000 nationwide
 - business lending
 - develop commercial and industrial space
 - create housing
- Small business development centers
 - in community colleges

Encourage New Local Businesses

- Add value to exported products, create jobs with a limited resource base
 - value-added processing facilities: Saskatchewan and Marshall, Minnesota
- Business incubators
- Creative financing
 - micro-enterprise loan funds: Good Faith Community Loan Fund, Arkansas
 - patient risk capital: Oberlin, Kansas
 - “sell” deeds to pieces of community: Ivanhoe, Virginia
 - social investment: Shore Trust Trading Group, lower Columbia River

Recruit Compatible New Businesses

- Pursue recruitment that fits the community
- Recruitment is a bonus, not be relied upon
- Ensure a net gain - consider the costs of recruitment, not just the benefits:
 - consider off-site and long-term effects
 - footloose businesses may move on
 - rapid town expansion can lead to net loss due to higher taxes and community problems
- Liberal recruitment incentives can lead to big losses
- “Bootstrapped” town is more attractive to new business

Four Principles of Economic Renewal

- Plug the leaks
- Support existing businesses
- Encourage new local businesses
- Recruit compatible new businesses

Nine Tools of Economic Renewal

- Ask why
- Manage demand
- Pursue development, not necessarily expansion
- Seek small solutions
- Find problem-solvers who care
- Increase the multiplier effect
- Find hidden local skills and assets
- Build social capital
- Organize regionally

Challenges to Today's Leaders

- Decisions are tougher
 - more complicated, more technical
- Decisions are coming faster
 - Things are getting better and better, and worse and worse, faster and faster
- Participation is down
 - membership in traditional community organizations has declined 25% in 25 years
- Partisanship is up
 - single-issue advocacy creates us-versus-them community politics

Cooperation Versus Collaboration

- | | |
|--|--------------------------------------|
| • Cooperation | • Collaboration |
| – “I want you to help me with my solution” | – “Let’s create a solution together” |
| – Implementation stage | – Development stage |
| – Few involved | – All relevant parties involved |

Principles of Collaboration

- Collaboration occurs early, during the development of an idea or solution, rather than later, during implementation
- Collaboration begins at the intersection of interests
- Collaboration does not necessarily require compromise
- Collaborators take responsibility for the outcome

Putting Collaboration to Work

- Understand their interests before describing yours
- Describe your interests instead of defending your position
- Join them before asking them to join you
- Set aside differences and disagreements to solve mutual problems
- Employ “active listening”
 - acknowledge
 - empathize
 - clarify
- Pursue easier issues first

Economic Renewal Process: Collaborative Decision-Making for Economic Development

- Mobilize the community
- Envision the community’s future
- Identify what you have to work with
- Discover new opportunities
- Generate project ideas
- Evaluate project ideas
- Select projects
- Develop project action plans

Results of Economic Renewal

- Realistic projects chosen by consensus
- Community commitment to the projects
- A new willingness to collaborate
- Enhanced community capacity

Recruiting Community Leaders

- Include influential individuals (whether part of a formal group or not) who:
 - have a stake in economic development
 - will be “surprised” if not consulted
 - could become adversaries if not consulted
 - you may not like
- Recruit each person
 - identify “bridge” people to make the contacts based on personal relationships and rapport

Who are Community Leaders?

- Established Leaders
 - Government officials
 - Business people
 - Chamber of commerce members
 - Realtors
 - Real-estate developers
 - Newspaper editors and publishers
 - Industry representatives
 - Political party representatives
 - Service group leaders
- Frequently Overlooked Leaders
 - Women and minorities
 - Retirees
 - Young people
 - Teachers
 - Health and social-service professionals
 - Religious leaders
 - Newcomers
 - Loggers, fishers, and miners
 - Farmers and ranchers
 - Environmentalists
 - Neighborhood activities
 - Artists and craftspeople

Maximizing Volunteer Involvement

- Which of the following should your group try?
 - Make time to recruit
 - Market volunteer opportunities
 - Actively welcome new volunteers
 - Ensure productive activities
 - Restate the purpose
 - Appoint a task manager

Maximizing Volunteer Involvement

- Which of the following should your group try
 - Define tasks clearly
 - Emphasize short-term projects
 - Accommodate limited participation Get to know one another
 - Acknowledge volunteers
 - Celebrate success
 - Adjust your attitude
 - Don't tolerate destructive people
 - Have fun

Maximizing Volunteer Involvement

- Which should you try?
 - Accept non-participation
 - Accommodate individual work preferences
 - Use volunteers' best skills
 - Avoid volunteer burnout
 - Offer leadership training
 - Contact volunteers before each activity
 - Feed 'em

Categories of Community Issues

- Arts
- Built environment
- Business and jobs
- Community (social capital)
- Education
- Government
- Health
- History and tradition
- Natural environment
- Recreation
- Skills and talents

Economical Renewal Council

- Create a new group, or use existing one
- Membership: respected community members
- Process of recruiting members
 - similar to mobilization (Step 1)
- Meet about twice a year
 - executive committee meet about once a month
 - open to public

Economic Renewal Council

- Possible Functions
 - Advocacy
 - Assistance
 - Leadership
 - Leadership development
 - Recruitment
 - Resource allocation
 - Communication
 - Record-keeping
 - Inclusion
 - Project management

What makes Sustainable and Survivable Communities?

- An inclusive, not exclusive attitude. There is room for all at the bar, or the alter
- A local economy that relies upon and serves the community, buying local whenever possible, and adding value where it can
- Compact, easy enough to walk, bike or skateboard to stores, work and services
- Local control of resources

What makes Sustainable and Survivable Communities?

- Local energy supplies and local control of efficiency projects
- Local food production sufficient to meet the needs of the community in basic food items
- Community spaces and commons
- Green spaces for play, work, and grazing
- Skill sets among the community serving the need
- Water

Powering down

- Use less of everything
- Drive less, bike or walk more
- Grow your own food
- Know your own and your neighbors skills
- Accept that change is normal and will happen a lot
- Be prepared for seismic shifts in lifestyle
- Know thyself

