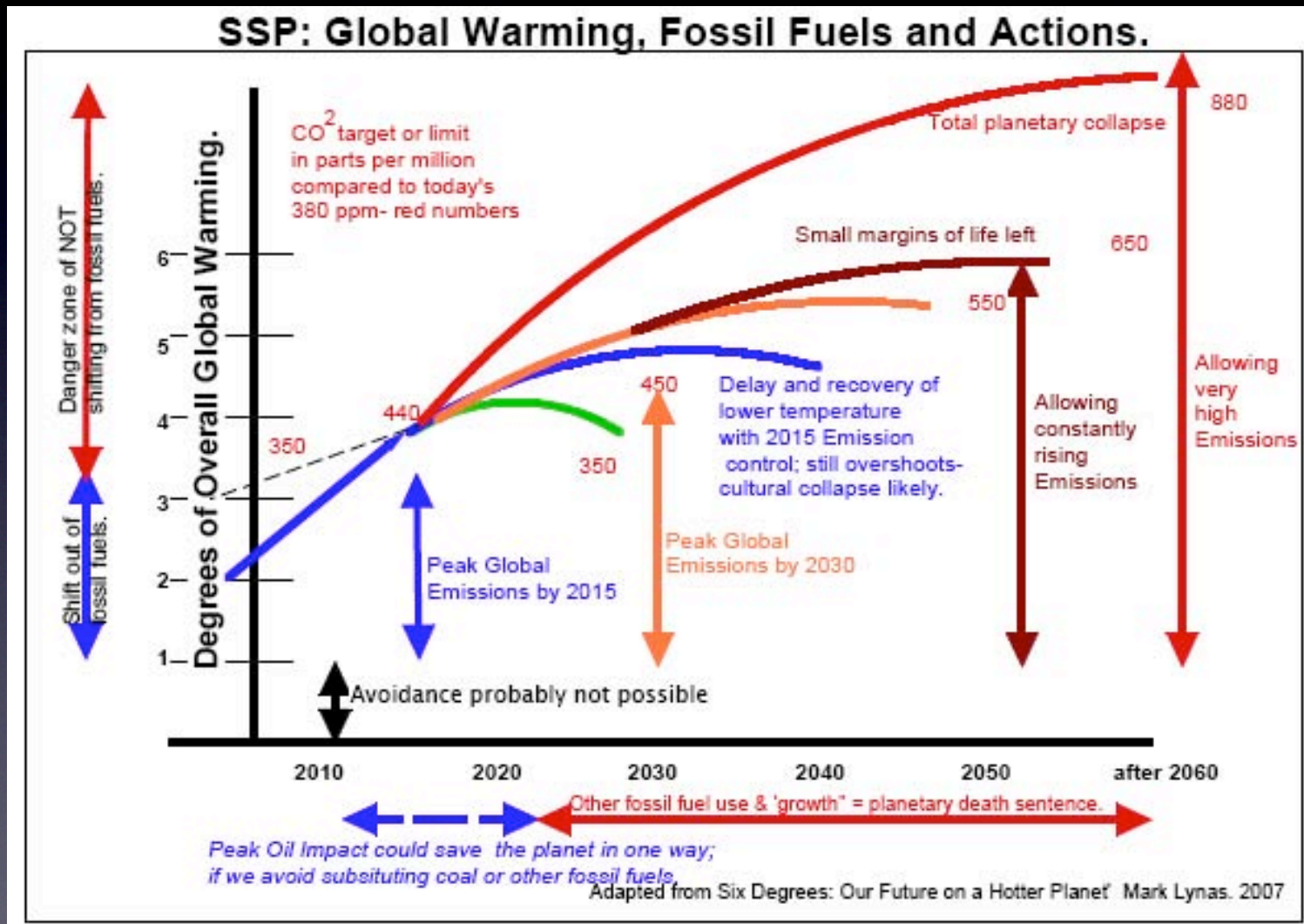


# BC Take Back The Land Agrologists

Clawing Back the ALR, recovery of our soils.  
2007

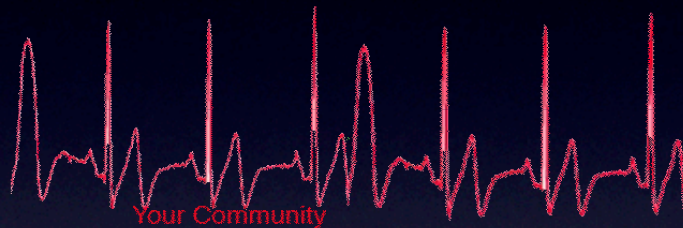


# Fossil Fuels & Heat



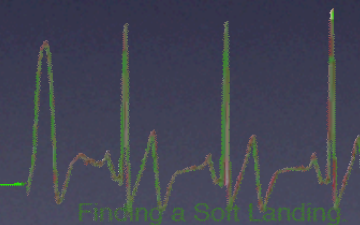
# Real Sustainability

YOU  
are  
here!



Air, Water, Food are now all at risk.

Restoring Local  
Agriculture  
is part of  
the solution.



# Why Are You Here?

- Continuing Education: a chance to pay to hear experts who know less about a subject than you do?
- To break new ground in both personal & the whole profession's role & responsibility in a soon to be changing society.
- This presentation is about Global Impacts & the change to your outlook & new opportunity for Sustainable Leadership.
- SSpA- a new way of working?



# Why am I here?

I need the credits.....

- Your Association has visionaries in it who think as a greater society we have some real problems approaching us.
- Visionaries seek out other visionaries when they are not sure. I am one of them, I am told..
- Visionary: a connoisseur of fine mushrooms. So you can see this does relate to Agrology.



# Agrologist:

From the French English Dictionary, Spuzzum Institute of Technology Edition 2:

- A-gro-log-ist: Someone who watches trees grow, a green religious movement.
- French version: Agro-logist: One who ponders what Agro means.



# Executive Summary

- Human impact on the planet is past the point of painless endurance for Gaia- Greek for Mother Earth.
- The Essentials of basic life are under real threat: water, food, and human rights.
- On the front line of food production are the farmers, & at the other end, you as consumer.
- One of the defenses in between food & loss of access to food for all, is the Agrologist.

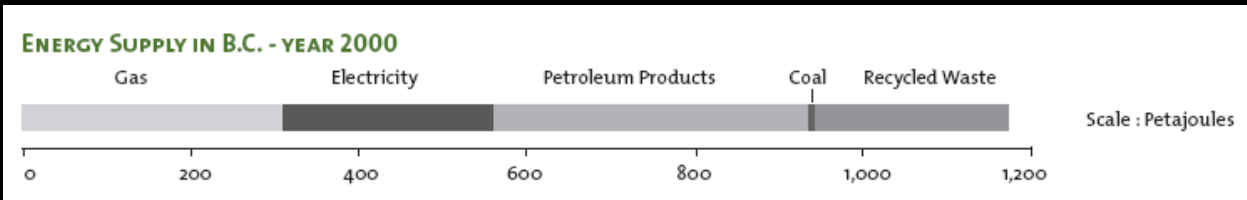
Agrologists as Leaders in Sustainability.

A presentation by a Wannabe Agrologist.

BC Agrologists Meet SSP: 2007

Balfour + Associates • Strategic Planning

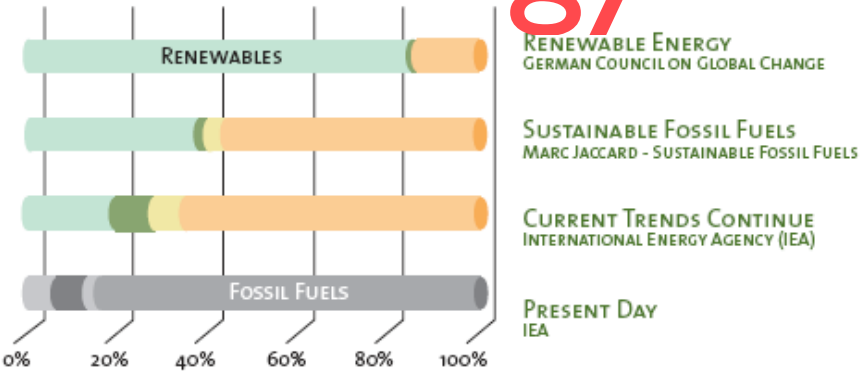




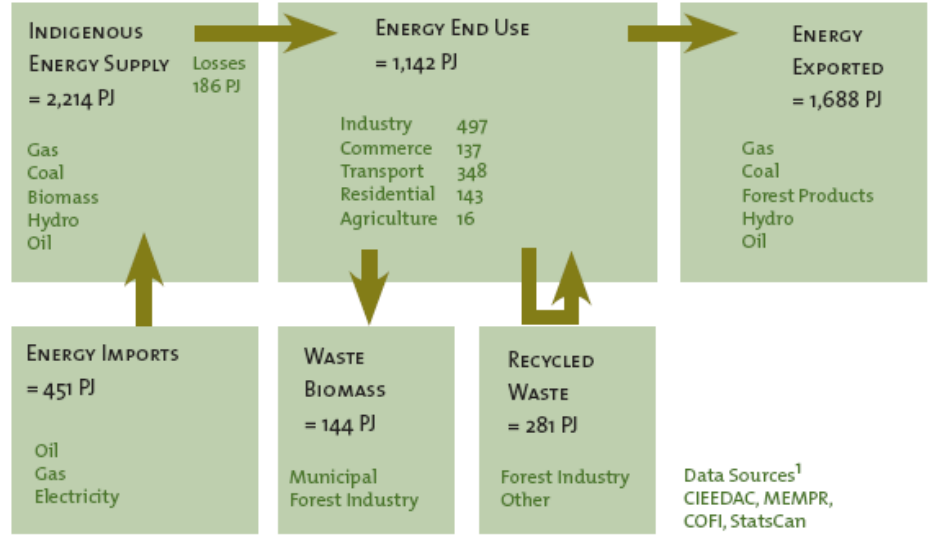
# Energy in BC

Don't think of using less, just find more energy. Hello Global Warming.

### GLOBAL ENERGY STORAGE: THREE SCENARIOS FOR 2100



### BRITISH COLUMBIA'S ENERGY ECONOMY IN THE YEAR 2000



1 - Canadian Industrial Energy End-use Data and Analysis Centre (CIEEDAC). British Columbia Ministry of Energy, Mines and Petroleum Resources (MEMPR). Council of Forest Industries (COFI)

How come farmland & food gets lost in all of this?



# Global Impacts Context

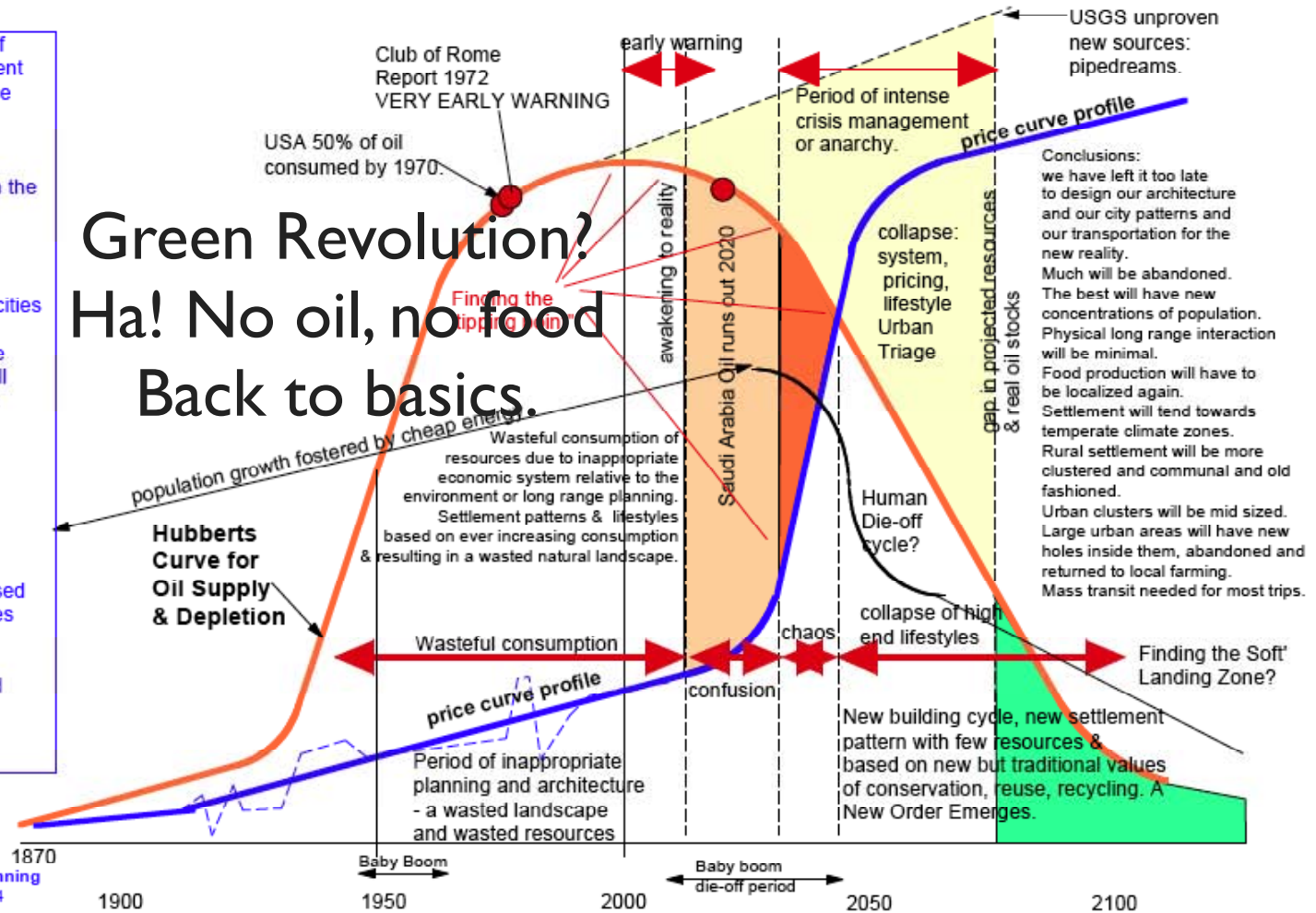
THE DEPLETION OF RESOURCES & THE IMPACT ON PATTERNS OF HUMAN SETTLEMENTS:  
THE NEED FOR LONG RANGE STRATEGIC SUSTAINABLE PLANNING.

We are neglecting the design of appropriate patterns of settlement & transportation systems for the fast approaching new reality of energy scarcity & resource depletion.

We need strategies to deal with the following new realities:

- settlements will tend to be located in temperate climate zones & on higher ground.
- large sections of our existing cities will be abandoned as they are unsustainable. New appropriate concentrations of population will emerge as physical long range interaction becomes minimal.
- food production will return to restricted smaller areas and serving local needs.
- mass transit will be used for inter and intra city movement of people & goods.
- settlements will be compromised of smaller towns, smaller houses & narrower streets.
- localized industry, farming & market return. Proximity to food production, social networks & natural reserves will mark points of new community.

Green Revolution?  
Ha! No oil, no food  
Back to basics.



- Hubbert's Curve and Cultural Sustainability  
BC Agroligists Meet SSP: 2007

# Agrologist.....

by any other name.....

## Passive role

- One who defines what is good soil for farming?

## Active role.

- A steward of the land: protecting our future?

## Proactive Role

- A warrior defending our Right to Eat?

## Reactionary Role

- Someone to hire to “rationalize new urban areas”?

Some of you might think some of these images are unfair..

Why are **you** an Agrologist?



# Team A

You are the Good Guys  
... no kidding.

- Agrologist: backup?
- NGOs, concerned, but with no teeth.
- Weakening laws.
- A sleeping public....

“The Industry of America is the development, sale & continuous supply of single family housing & everything associated with it.

Except food....?”  
James Kuntzler

# Team B

What the Agrologists have to Battle...

- Narrow self interests with NO world view.
- “Control of laws”.
- Tiers of industries

	Land owners	
\$	Developers	\$
	Must-Grow Councils	
\$	Architect/Engineers	\$
	Planners & Lawyers	
\$	Banks & trusts	\$
	Supply Chain of Building	
\$	Flat land builders	\$
	The Myth of Lifestyles	
\$		\$





# Global Impact Time

- Global warming: loss of croplands, water- famine?
- Too radical a shift in plant regimes- famine?
- Peak Oil: first the \$200 Papaya, or loss of imports
- Then the Mass Migration: fleeing a loss of energy.
- We need food for a quantum increase in population: or we need a quantum decrease in population, in extreme considerations. Volunteers?
- Or we need to make other corrections. (Too late? We should have done that in the '70's)



## Pattern of Community Related to Energy

Finding the Stable Glide Path:  
Taking control to achieve a Soft Landing

**Cheap Energy Availability Curve**  
Peak Oil, 1970-1990's at latest  
**Adjustment to loss of resources: optional paths**

How all of this affects Urban Planning:  
we are not doing any yet to deal with  
this in any effective manner.

- Translation, impact on planning & architecture: the circles represent totally different cities in form, uses, sustainability of both, lifestyle, mobility patterns, livability etc.
- Strategic Sustainable Planning has to address the required changes to the whole pattern of community in all those areas for our culture to prosper or even survive.

Towns before cars & sprawl

1870 1900 1950 1970 2000 2010  
cultural/energy baseline: Pre-oil

Hubberts Curve: Oil Peak but also overall energy availability.

Alternate history paths  
Oil half life 500,  
5,000,  
5 million years

Missed Opportunity Pilots  
(Club of Rome warnings 1970  
-we could have been near level  
flight by now if heeded.

Best Current Hope:  
It may be too late but  
Can we do  
anything; we all must

USGS failed  
projection of  
oil fields

Towns & buildings in  
unsustainable pattern 2000/2010

"Blind Idiots & Partying Optimists" Path:  
Hard Crash with no options left

Late Learners  
with a lot of  
help & hope:  
Can you do  
anything; you must

Urban reorganization  
absolutely necessary  
to sustain any of the  
Soft Landing options:  
plus changes to mobility  
& lifestyles. Doing more  
with less, ALL buildings  
will require retrofit &  
many will be abandoned;  
Urban Triage; letting  
some parts of the cities  
revert or go all green.  
Faster adjustment allows  
for "higher level" of post  
energy crash existence.

Can we even survive and change  
to not crash through an 1880  
lifestyle/civilization model?

Towns at risk of total  
failure along with most of  
our civilization. Highest risk:  
our institutions which define  
our culture.

Social Psychology: slow learning and adaption is near impossible (Jared Diamond)  
No weaning from cheap energy; we can only adapt to a crash condition (No pilots, only navigators yelling help)  
To put us on a safe glide path, we all have to wake up and take charge of the plane.  
- It cannot be the work/fault, responsibility of the other guy; it will take all of us to protect our culture from impact.

Strategic Sustainable Planning  
Vancouver City Planning Commission  
2005.09.16 rb/bca\*sp

Agrologists: adding the green fingers

- Finding Stable Urban Patterns with less energy



# Agrology: a Battle Plan

- Needed: a STOP to ALR erosion/exclusions.
- + No net loss in any sub region period
- Start the Claw Back of land lost to urban uses.
- Aggressively create “Green Fingers” into urbanity
- Adapt urban lands & buildings for new agriculture
- Start a program on overlooked **Niche soils sites**
- Go for land tax reform for land conservation

There are more alternate solutions for urban land use than we have for farm production.

Penalize industrial & commercial land waste??



This issue is raised is to help open discussion in the face of closed doors.

# REALITY CHECK

- Realists: someone who knows one reality
- Opportunists: they have another plan
- Survivalists: better have lots more ideas than either of the above.



Realist: "I know reality, reality is what needs to be done."

Catalyst (according to r2b4): "The alternate survivalist goal is to change the Reality."

Conclusion: the 2nd path has more options.

It is the real Reality, and open to exploration,  
-to avoid it gives you only one path.

Conclusion: Self described Realists are usually not Realistic and certainly not survivalists.



# “Stopping the Retreat”

- The Industrial Food Supply System we have created has shuffled traditional, sustainable farming into a niche position.
- And then the other supply lines of housing, transportation & entertainment forget how they exist & attempt to take over & ignore the farm land subsistence system, erasing essential lands for crops.
- People do not know where their food comes from or even what they are really eating. Mostly transport oils.
- The supply lines of food to city are now overextended & cannot be sustained under the impending oil crash.

This is a suicidal approach for any society. What can one do about it?

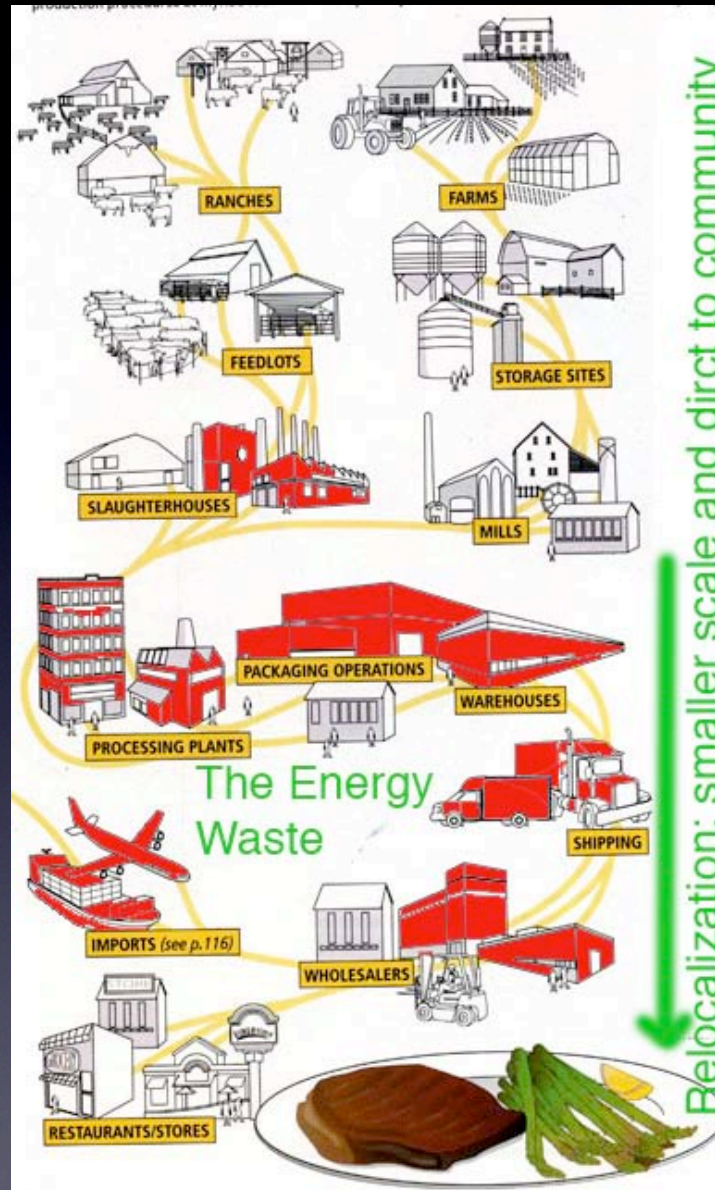


# Finding new Allies.

- Everybody has to eat.
- The Oil age cheap food era is about to end
- Victory Gardens: Strategic Planning for food is now a necessity, not just a good idea
- More people working to raise food is a new reality. This also means more land.
- Oil age Green Revolution is on the wane:
- Less pesticides & fertilizer = lower yields
- Loss of cheap transport = grow locally or else.



Our Modern  
Common  
Problem: our  
food supply  
chain scale &  
abuse of energy  
puts us all at  
risk.



This high energy  
use  
hub & spoke  
system is wasteful  
& has to go: not a  
wish but from  
peak oil price  
shock & collapse  
of the network.



# Bringing in the Allies 2

“Environmental Restoration”

- “Urban” Professionals need to be tapped & made part of the claw back team.
- Communities need to become aggressive claw back advocates
- Baby steps & token efforts are not good enough: public policy has to change.
- The change requires the support of all, so the public to the selfish interest in the Green Fingers movement has to be made apparent.

“Consciousness Raising”

“WE are out of time”

“There is no downside to Green”



# A Case History: Erosion

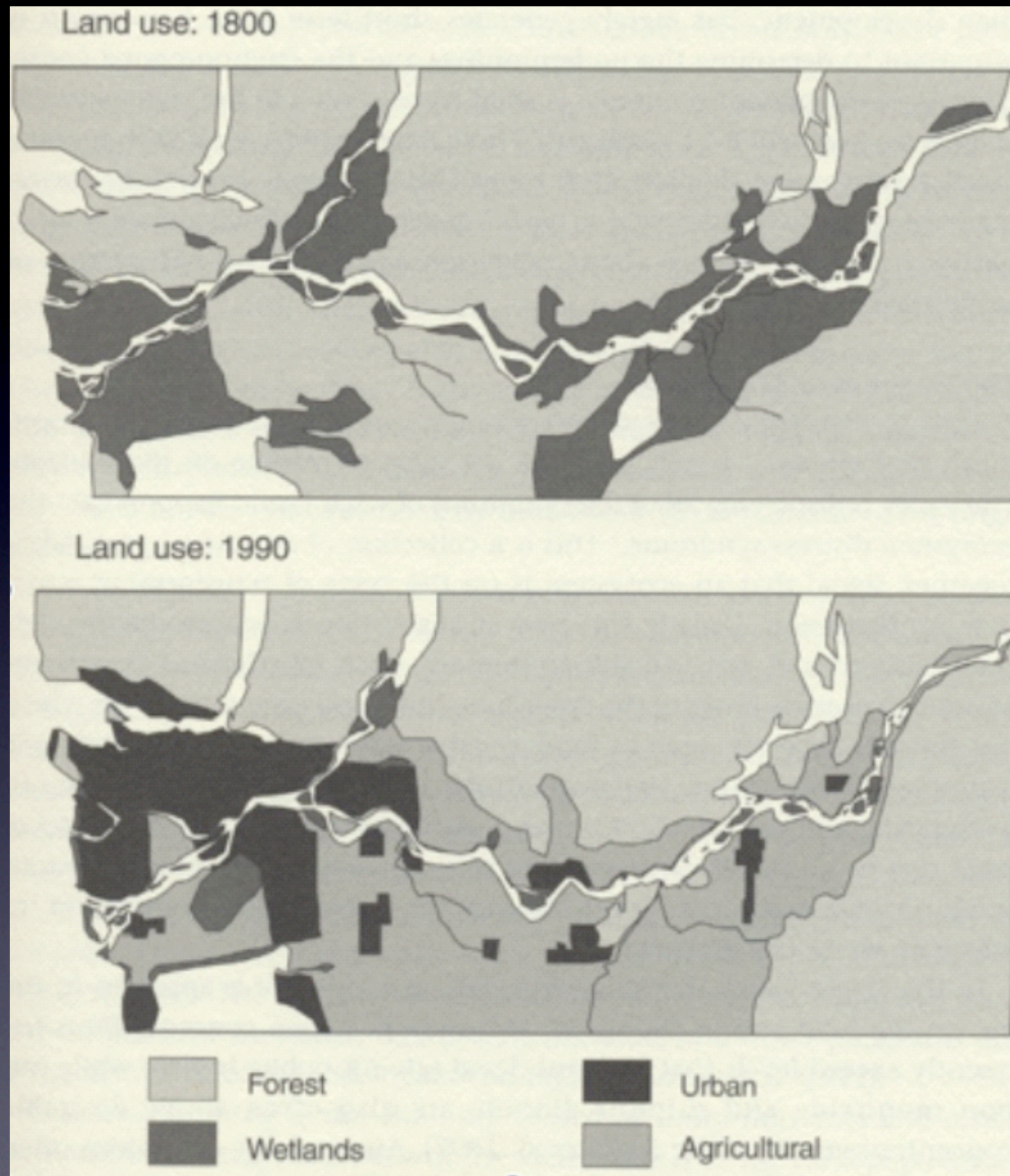
- 1970's: rural Maple Ridge & Pitt Meadows push for industrial park to infill their common boundary zone.
- Of course it was ALR lands & on the floodplain.
- Over 30 years, Pitt Meadows gradually turned the industry lands into housing & strip malls.
- Both towns allowed major strip commercial to the detriment of their own town cores.
- 2000: this site becomes new bridgehead to Langley, linking other former farms now industry going-to-strip-commercial.

200th Street:  
A non-sustainable  
node of oil age  
engineering &  
planning.

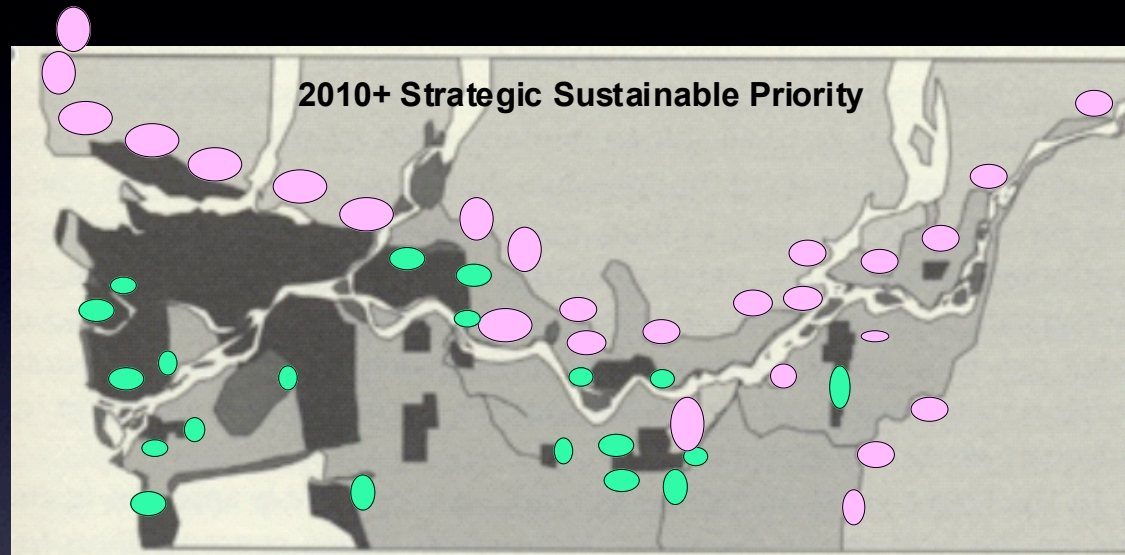


# Land Conservation Starts Now

Land conversion is not a one way street, we have to turn some trends around to become Really Sustainable.



# New Directions



● Green sites to reclaim or under threat & needing vigilant protection. ALR clawback sites in some cases.

● Urban New Location Sites: BC Hilltowns off the floodplain & farmlands, also based on new Rail orientation.

New Directions must include claw-backs of ALR losses plus pulling out of floodplains given rising oceans levels in the next century.



# Key Agents of Erosion

- Industry is used as a first line of excuse, to take farmland for ‘higher use’. (Need for farm removal tax).
- Farmland IS the highest & best use though. Think....
- After a brief interval, it seems industry “wants to go elsewhere” so the land “must be converted to commercial & housing”. Farmland is our new option.
- This new ‘activity’ robs from existing community vitality. It is the wrong thing in the wrong place.
- This ‘trend’ is against all principles of Real Sustainable Community Planning: social, environment & economic.



# Industrial Waste: Land

- Industry argues they must always have an “oversupply of land” ‘to maintain the market’
- As it is in oversupply, there is no attempt to use this land efficiently. So this pushes the uses ‘out’.
- Industry is taxed at ‘lower rates’ to encourage jobs.
- This attracts “parasite industries” which costs the economy more in total than they contribute.
- Tax reform would correct that. (Remove farm tax).
- Tax reform to force urban land conservation would shrink urban footprints to a quarter of today’s.



# Strip Cancer

- Industry sites get roads, shopping centre interest see location, roads, and they do not want to pay the fair price of locating in town, thereby destroying both downtown and town edge.
- This standard of planning and oil age engineering consumes ten times the land with more damages, with little return for the whole community.
- Oil Price Shock will collapse all of this waste but not without massive economic damage.
- The stage is set however, for the start of the claw back of farm lands & creation of urban agriculture.
- The restoration will be costly but necessary. Urban change of pattern of community is required, not a choice.



# Urban Agrology

- Urban areas have 30 to 40% of land in roads.
- Oil era engineering provides roads at 2x, 3x the size or area needed for 'emergencies' & 11th peak hour demands.
- At least half the road rights of ways could be reclaimed for opens space & urban farming.
- Post Oil economy White Elephant buildings will make a new recovery industry: winter crops, or greenhouse productions.

Post Oil buildings: high rises, malls, warehouses,  
office buildings, highways, airports.



# Pro-active Agrology

- Make no excuses.
- This is about correcting massive mistakes.
- If we are wrong, it will only be for a short period, we might have a surplus of farmland or food, and is that a problem?
- If we do not act, we will have a certain food shortage or unaffordable food 'futures'.

Agrologists approaches carried into other areas:

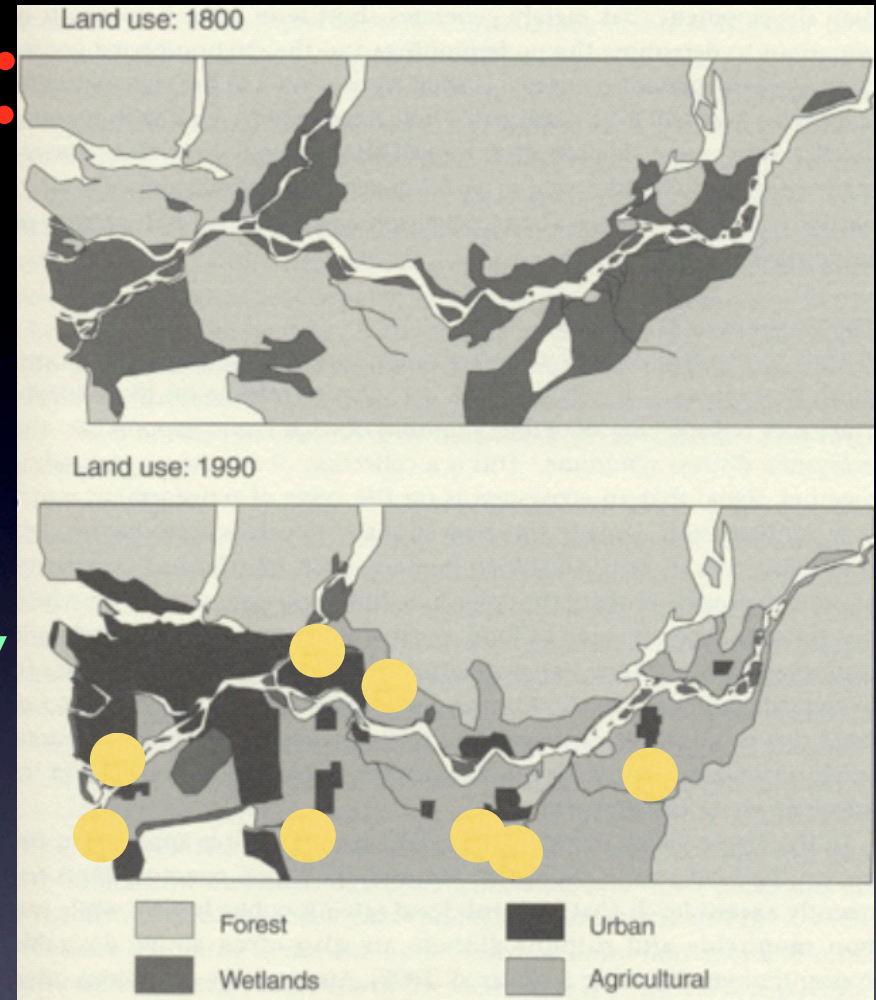


# Claw back sites:

- Metro Vancouver examples:

Not a Wish  
A Necessity

Richmond South  
Delta Foreshore  
Surrey Hazelmere Valley  
Pitt Meadows floodplain  
Maple Ridge: Allouette & Highlands  
Abbotsford: Airport/Mt Lehman, & SE.  
Chilliwack: the city to Vedder corridor



Agrologists approaches carried into other areas:

# Urban Redirection

- New urban areas go to the hills: the Land Commission needs a PROACTIVE policy arm to demonstrate & then support for hill town alternatives.
- 'Rounding out' of old urban onto farmland must end & be reversed. Otherwise there is no end to it.
- Green fingers do not spawn sprawl but give agricultural support in direct contact with the dependent community. (European village pattern, or New Sustainable Community Marblization)



Agrologists approaches carried into other areas:

# Strengthen the ALC

Needed: a proactive ALC & Ministry

**A Ministry of Alternative Development**



- Rather than acting as apologists for development, a revitalized ALC would correct past exclusions, push for densification/ land conservation in towns, & with infrastructure funding, building of new hill towns.



Agrologists approaches carried into other areas:

# Municipal Reform

- Municipal amalgamation or county government would act to cut out growth & competition on boundaries in areas like Metro Vancouver.  
(Developers use divide & conquer on the edges of districts, pulling communities apart.)



# New Partnerships

- Defense of the Realm takes on a new meaning.  
No Food: No Realm.
- We need cooperation at every level of society.
- Agrologists need to enlist the support of other disciplines to create a new sustainable pattern of community where the agrarian base is integral to the local community, not an after-thought.
- Conversely, where agrology is integral to planning, not forgotten or tacked on later.
- This is another 'Learning from Tradition'.

Food Production is not just another service to the post industrial economy, it is the keystone.



# Saving the Commons?

- This is the Restoration of something we have taken for granted, abused and destroyed.
- This is about Restoration of the Commons.
- It is first and last of all about your children.

For Agrologists:  
**What steps to take?**  
Some examples to follow:



# SSpA: Agrology for Strategic Sustainability.

- Protect the Agricultural Land Reserve
- Claw back lost agricultural lands, now.
- Aid in Urban Agriculture options.
- Help divert urban uses to hills, & alternate patterns of urban community. (Design with Nature.)
- Aid in farm hamlets, new farming options.
- Move, help find Niche farms & hamlets.
- research new cold climate/mountain farming

An  
ecological  
& social,  
not  
corporate  
agenda.



# ALR: Protection

- Rounding out of towns into farmland is in fact counter-productive, we need the green fingers & high green edge exposure.
- Urban growth on floodplain & land at risk from rising oceans is only going to cost society extreme financial burden.



# ALR Claw-back Program

- In one generation, all the land removed from the ALR was unnecessary: there were & are alternate means of taking the urban land demands. Policy Area  
**2**
- If we did not have the farmland to abuse, we would find alternate solutions.
- That time has come and gone.
- The target now is claw-back: a necessity.

Industrial Land Abuse: correct  
with tax reforms & reward  
those who conserve land.



# Hilltowns: ALR defenses.

- BC is 97% hills & mountains, 3% farmland Policy Area
- towns can build on hills but it is harder to farm a hill than a good soil lowland **3**
- Agrologists also need to push the alternative for towns & housing just to take the pressure off the farmlands.
- Educating the flat land developers & redirecting engineering/planning standards is a top priority: they are stuck in oil era concepts.



# A Farm Hamlets Agenda

Policy Area

4

- Megaculture farming is oil dependent & can only shrink in scale.
- A few luxury items like an air freight \$200 Papaya will persist, but not in a large scale.
- Economic stress will lower real income/raise food prices (see aginflation factors.)
- Restoration of community based agriculture is unavoidable, not wishful thinking.
- (a) Green urban fingers to service adjacent urban areas plus (b) dispersed farm hamlets are essential.

More of us will be  
spending more of our time  
raising food.



# Cooperatives Roles

## 5

- Social dislocation from global impacts will tend to make people withdraw.
- Withdrawal can collapse economies.
- Local cooperatives can overcome the fear & provide joint economic defense, joint growth of sustainable economy -where individuals are fearful & corporations have chosen to abandon the scene.
- Small towns & major eco-basins likely will have little choice left in industry & commerce



# Niche Farms Program 6

- Identify Niche sites with Limits to Growth.
- Limit Niche pattern to service/match the ecobasin.
- Assure transport requirements are minimal
- Assure bio/geo/social impacts are balanced.
- Any excess in pressure is back to urban absorption.
- Recognize social unit sizing of hamlets in plans.
- Test all sustainable options- this is a new era.



# Ecological Community 7

- Crown Land for Sustainable Community Planning:
- Requires a hard edge; a NO GO boundary
- Management of ecological basin: water, land, forest, farm, hamlets, the Green Net.
- Intensive reconfiguration of a smaller urban footprint for sustainability: links to the Green

The End of Rounding Out  
But acknowledging “spot patterns” or Niches for hamlets.



# ALR does NOT stand for Arterial Land Reserve

Policy Area

8

- No more highways through farmlands
- Go back & narrow highway Rights of way
- Redesign Interchanges



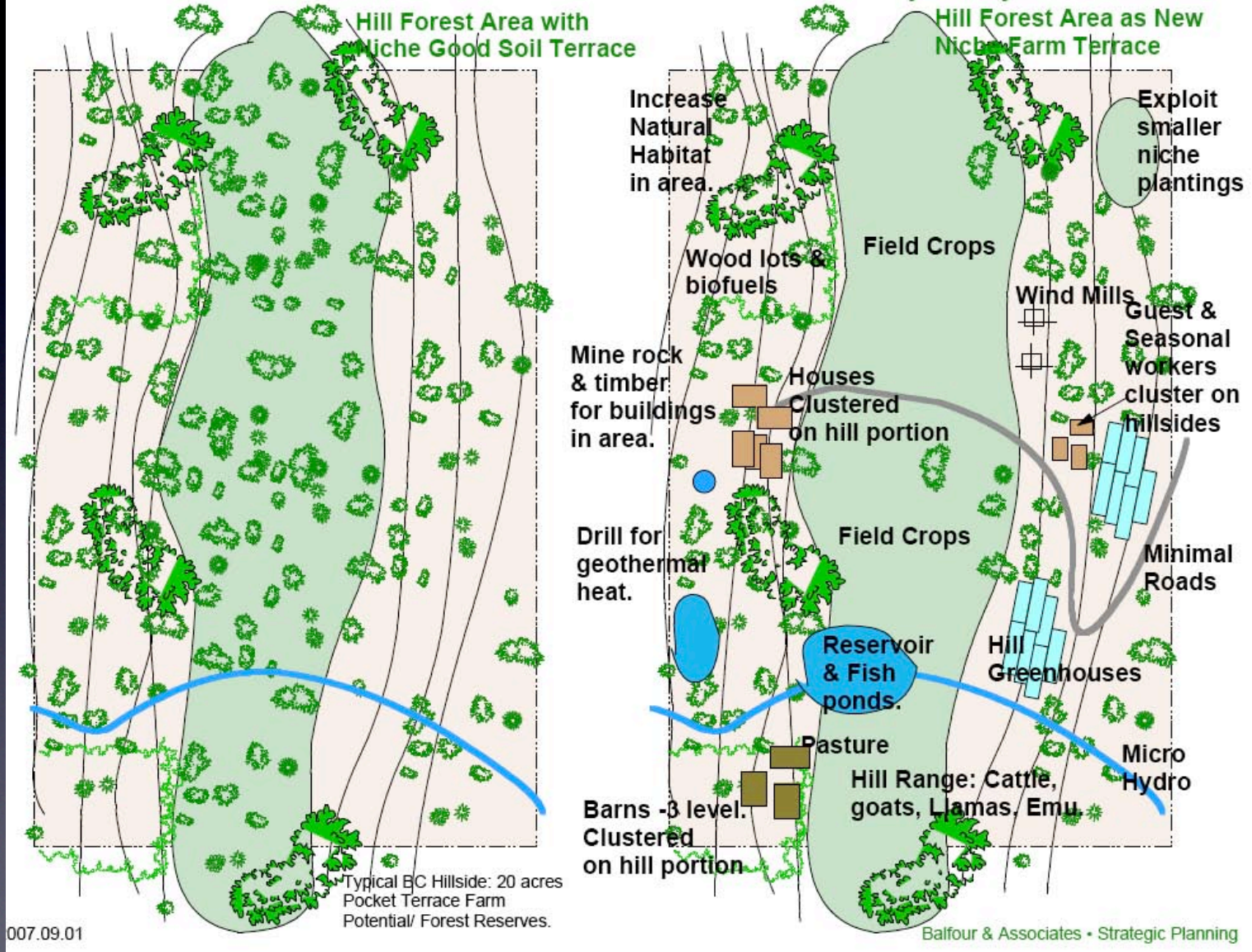
# Ports & Industry 9

- Current globalization demands are a peak which will undergo reversal
- But lands alienated for farming are hard to reclaim, so:
- Push farm & industry into water, not onto farm lands.



# Partnering: with Foresters.

## Niche Farms: Post Oil Homesteads & Hamlets: A Kootenay Valley Model

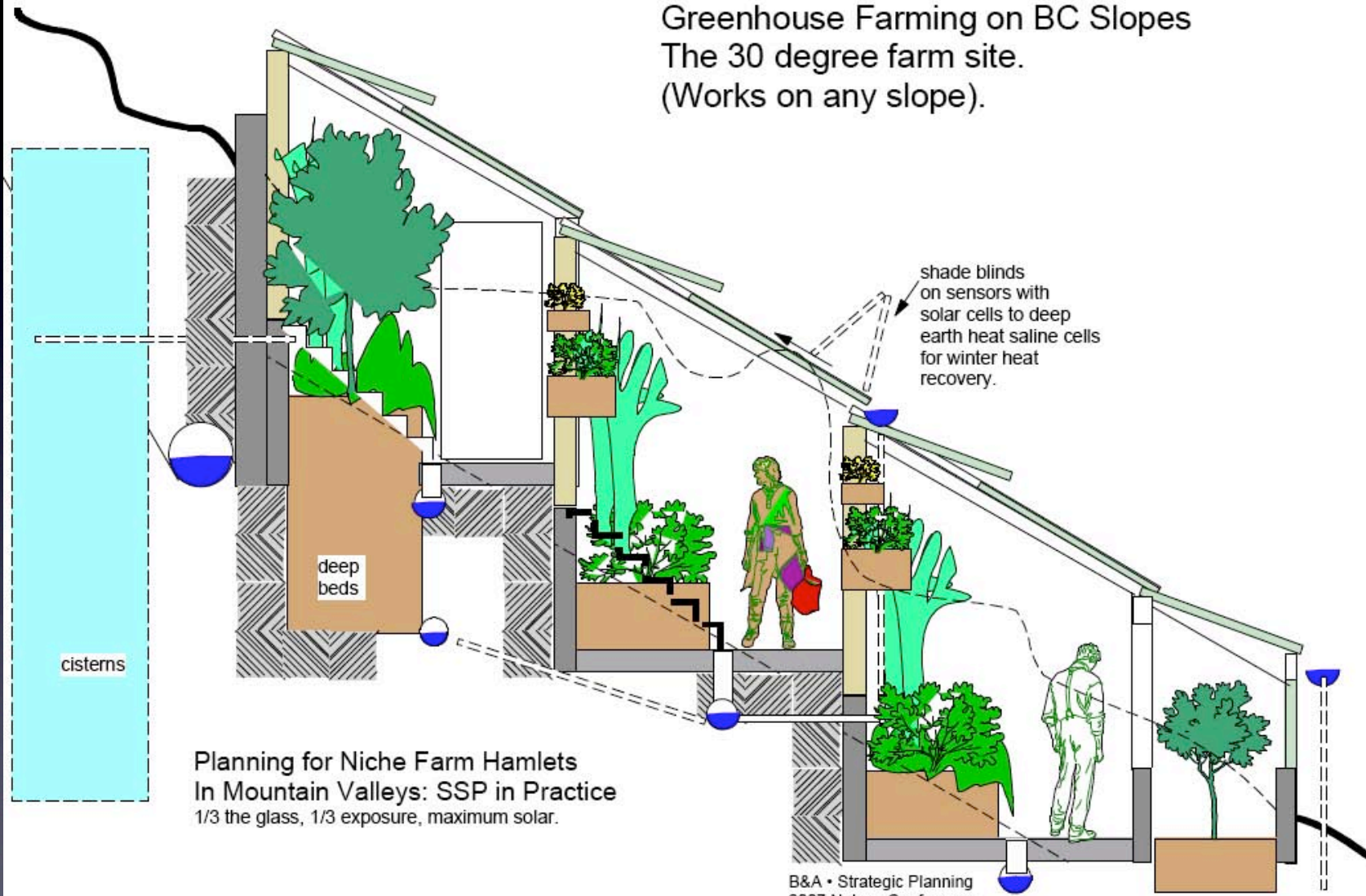


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# Partnering: with Geologists.

Greenhouse Farming on BC Slopes  
The 30 degree farm site.  
(Works on any slope).



# Partnering: with Architects.

Stop the retreat: advance into the City.

Reclaim land for horticulture.

Blast open parking lots.

Convert glass high rises to greenhouses

Convert warehouses to winter gardens

Making Green roofs more than token efforts

Streets as winter-gardens

Interstitial spaces: from waste to production.



# Partnering: with Councils. and cows...



Rewriting bylaws to help Green our cities

New zoning to protect the farm edge

New models of mixed uses & farming

New models of farm hamlet

Working to convert suburbia to sustainable forms

Finding other supply chain models: food to table.

Using horticulture to cool the planet.

Stopping Deserts, Saving Forests, protecting water.



# A Reminder: you are what you eat?

Cereal grains - 61.0 kilograms (kg) per person

Refined sugar - 22.3 kg/person

Beef - 13.9 kg/person

Pork - 9.7 kg/person

Poultry - 13.4 kg/person

Eggs - 12.3 dozen/person

Fish - 6.5 kg/ person

Cheese - 9.9kg/ per person

Ice Cream - 5.8 litres/person

Yogurt - 4.9 litres/person

Milk - 58.7 litres/person

Table cream - 2.1 litres of table cream/person

Fresh Fruit & Vegetables - 37.6 kg/person

Processed Fruit & Vegetables (froz., cans) - 8.0 kg/  
person

Juice - 23 litres (half orange)/person

Oils and fats - 18.6 kg/person

Coffee - 86 litres/person

Tea -52 litres/person

Soft Drinks - 85 litres/person

Beer - 77 litres/person (age 15+)

Wine- 13.9 litres/person (age 15+)

Spirits - 7 litres/per person (age 15+)



Here comes the Neighbourhood.



New housing developments are places where families take root and communities grow. At Genworth Financial Canada, we help that growth by making it possible for more Canadians to purchase homes sooner with less money down and lower monthly payments. Our innovative and flexible mortgage insurance products have opened up new market segments by servicing a wider range of new homebuyers' financial needs. Making homeownership more accessible and creating more customers for the homes you build is what we're all about.

To find out how we help build your business, call 1 800 511-8888 or visit [www.genworth.ca](http://www.genworth.ca).



Genworth  
Financial  
Canada

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*The HOMEOWNERSHIP Company*

Eat?  
Not  
for  
long.



# Stewardship

There are lots of options for other land uses to go in other places, but no place for farmland to retreat to.



&  
SWAT  
teams.

Our farmland, our source of food needs more advocates, defenders and stewards. You First.

