

# Bio-regional Food System Design and Planning

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# Outline

- Rationale
- What we hope to accomplish
- Methodology
- The team
- Anticipated outcomes

Background

# Economics

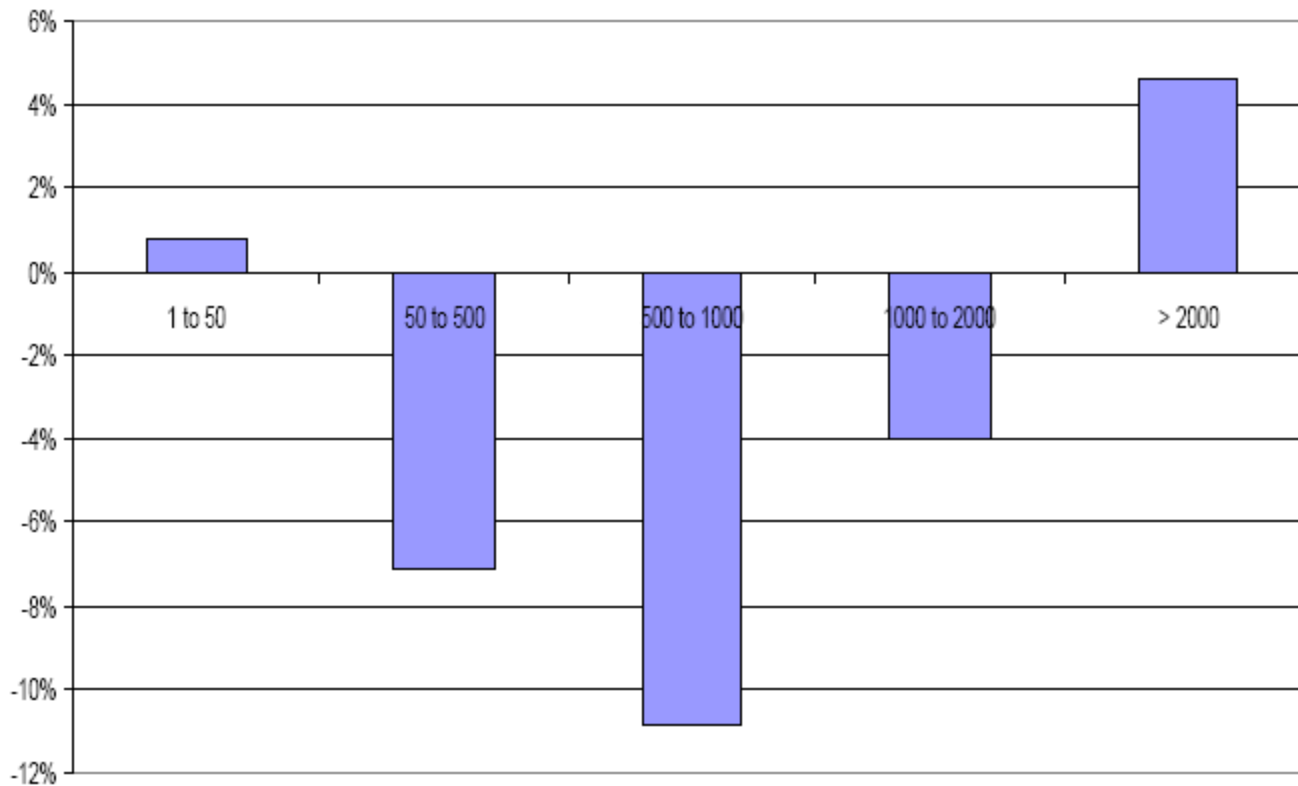
- 2010- B.C. agriculture grossed \$2.5 billion, lost \$87 million
- B.C. lost 25% of its farms over last 10 years
- Agriculture can't compete economically for land (despite the ALR)

*"Cumulatively B.C. [farming] is not a healthy industry"*

Garnet Etsell, Chair  
B.C. Agriculture Council  
Vancouver Sun, June 11, 2011

# The trend

Percent Change in US Farms by Acreage Category, 1997 to 2002



Agriculture contributes 10- 25 % of  
GHG emissions- up to 50% for the  
whole agri-food system

Moreau et al. 2011

B.C. provincial government mandate-  
all municipalities must reduce GHG emissions  
by 80% by 2050

# Food costs outpacing inflation

## Canadian inflation 2008



[www.conservancy.bc.ca/imagecatalog/UBC-Farm.jpg](http://www.conservancy.bc.ca/imagecatalog/UBC-Farm.jpg)

Overall-	1.2 %
Food overall-	7.3 %
Cereal products-	12.4 %
Fruits/ vegetables-	26.9 %

Canadian Broadcasting Corporation News, 2009

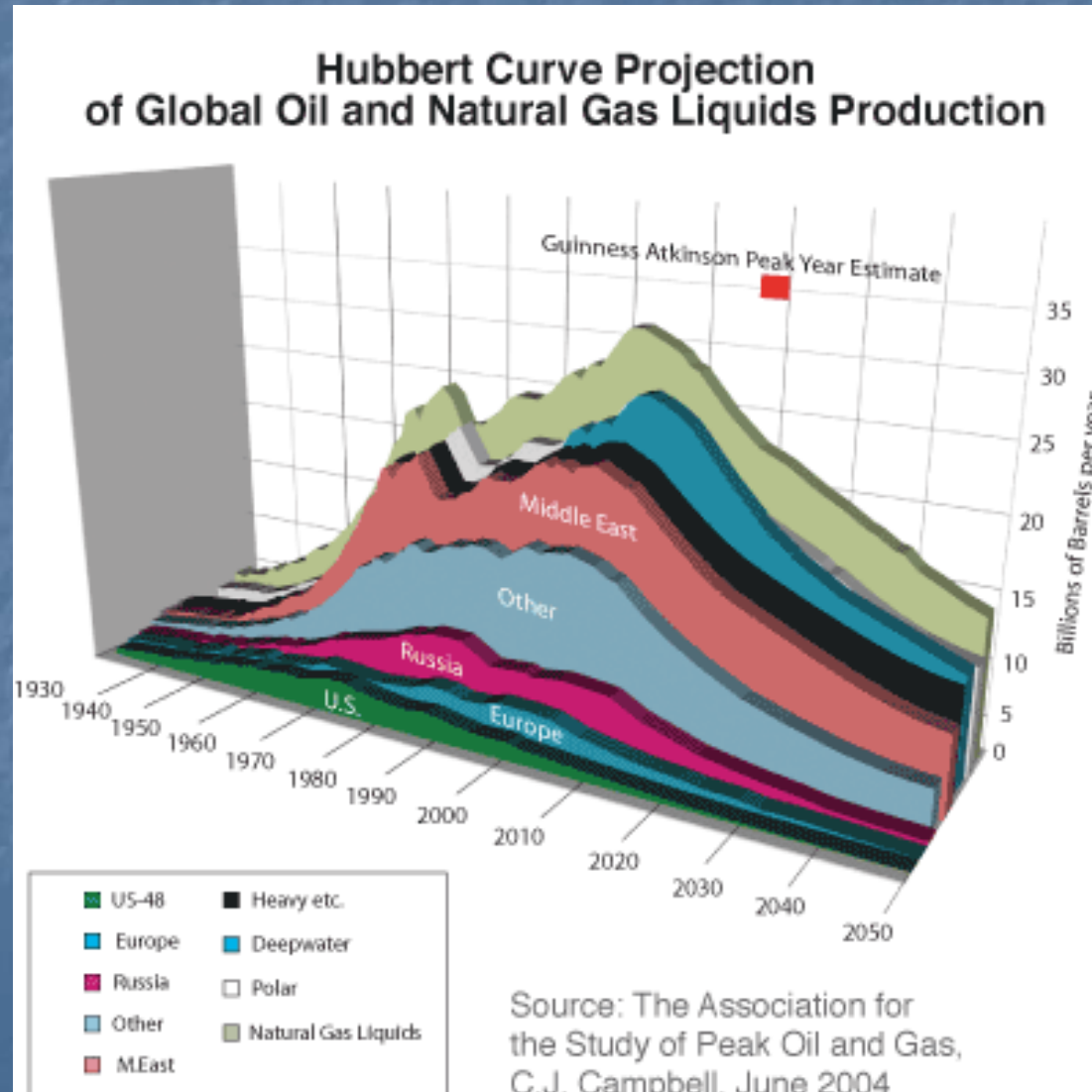
# Energy intensive dependent on fossil fuel

Agriculture's EROEI = 1:5 on average  
1:10 or greater for some

Formerly agriculture represented a net  
energy gain (2.5:1 in 1940)



# Hubbert's Peak: Global Oil Depletion



“End of transnational-global agri-food system”

“Resurgence of local agriculture, bottling, canning, processing eminent”

M. Simmons  
Global Oil Depletion and  
Implications for the Pacific Northwest,  
2006

# Global vs. local?

What kind and configuration of food system is appropriate for my life place?

# Bio-regions

Areas that shares similar topography, plant and animal life, and human culture

# Agri-Foods Real Challenge

Substantial (bio-)regionalization of agri-food to compliment and balance the global system...



# The opportunity

and in doing so capture a significant portion of the food market for local economies.

\$5.5 billion in south-west B.C.

Sister projects- began two years ago

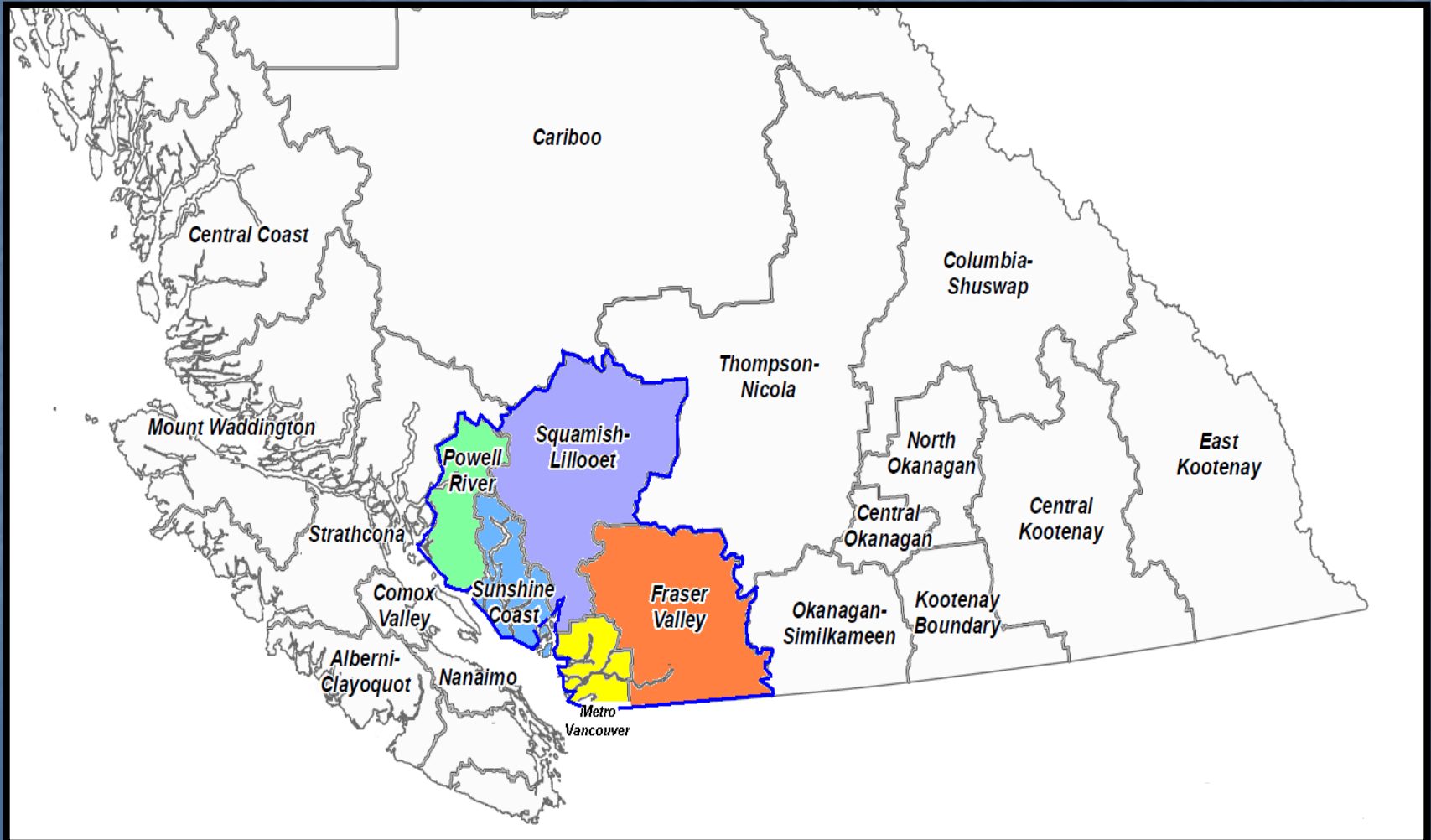
The Yukon and South-west British Columbia

# Project goal

Engage communities of interest and broad stakeholders in the design of a realistic, practical, comprehensive bio-regional food system design and implementation plan



# Southwest British Columbia





# The Yukon

# Bio-regional agri-food systems- maximize supply predicated on ecology and environmental capacity of place

- Pre-production
- Production
- Wild harvest
- Processing/ storage
- Distribution
- Sales
- Waste management

# Our focus

- Small scale
- Human intensive
- Low input
- Alternate market
- Environmentally sound
- Community focused

To compliment and operate in  
conjunction with the existing agri-  
food system

# 3 phases over 3 years

Phase 1- baseline, resource and capacity assessment

Phase 2- design of food system

Phase 3- implementation plan development

# Preliminary design directives

- Identify production and business opportunities
- Provide for wild harvest
- Significantly enhance the regional economy
- Create good jobs
- Reflect diverse perspectives and needs
- Address critical environmental issues (GHGs, biodiversity, nitrate leaching)
- Maximize regional food self-reliance
- Strengthen regional communities

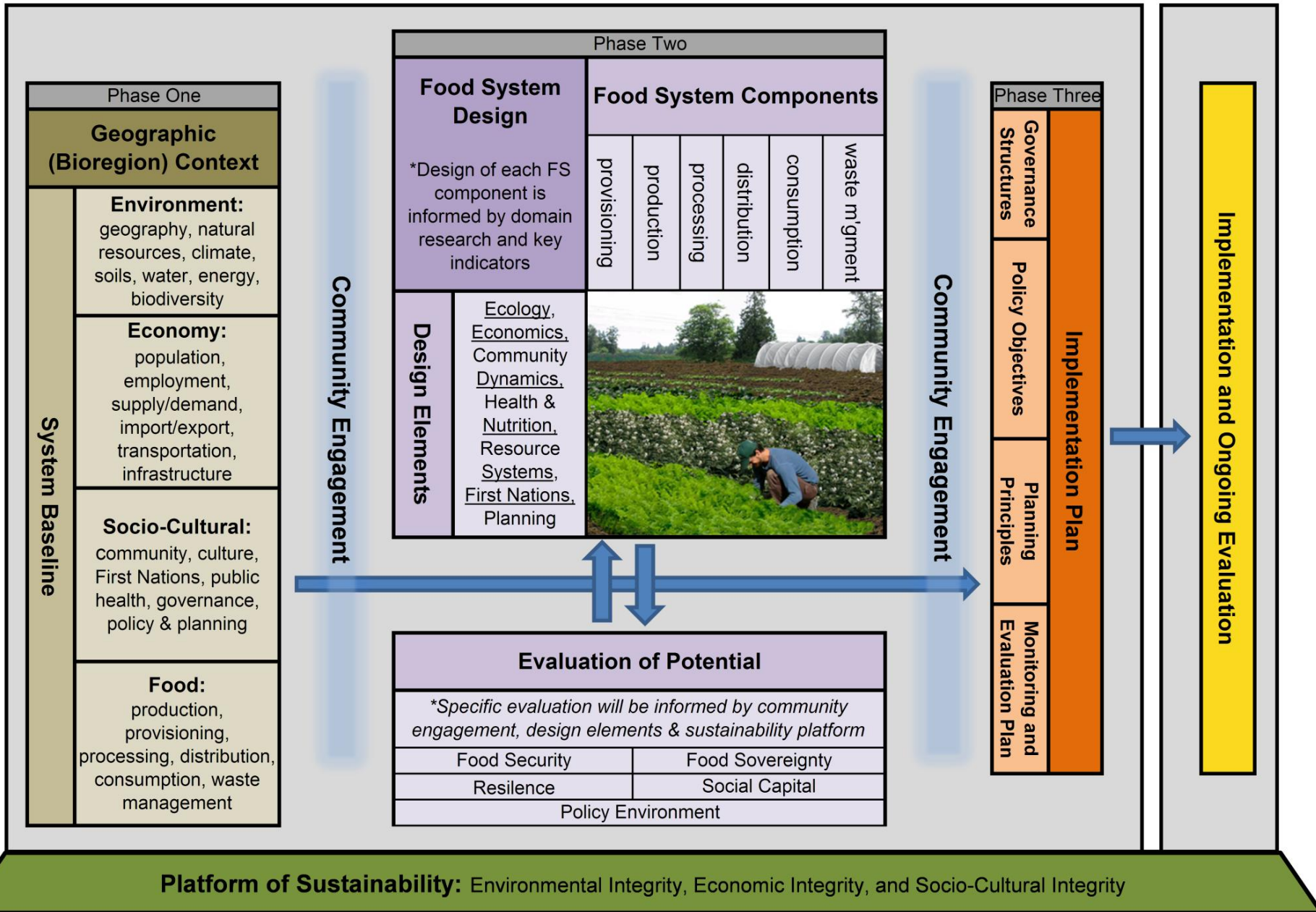
# Implementation plans

- Planning principles
- Policies
- Tools
- Strategies
- Governance
- Timeframe
- Evaluation methods



# Stakeholder engagement critical in all phases

- Communities
- Non- government organizations
- Municipal and Provincial Government
- First Nations
- Agri-food sector
- Business



# A roadmap

- Clear
- Realistic
- Practical
- Doable
- Empirically based

# Potentials fully delineated

- Contribution to regions economy
- Job creation
- SMS business opportunity
- Food self-reliance
- Ecological footprint/ GHG reduction
- Bio-diversity enhancement
- Community health

# The project team

- 25 investigators
- 7 universities
- Private sector collaborators
- Yukon and BC

# Study domains represented

- Supply chain
- Economics
- First Nations
- Ecology, agro-ecology
- Ecofootprinting/ GH Gases
- Community health/ nutrition
- Policy, planning, governance

A 21<sup>st</sup> century, post-industrial vision

A global network of bio-regional  
agri-food systems

# Please contact us

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