IMPLEMENTING SUSTAINABLE FOOD SYSTEMS:
People, Policy, Power, Partnerships

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CENTRAL POINTS:

WHO?

WHAT?

WHY?

HOW?

Aim: Increase adoption and spread of sustainable practices in food systems

→Keys to Change: HUMAN FACTORS!
WHO? FOCUS ON PEOPLE AS CHANGE-MAKERS –

CREATE “PROBLEMS” YET PROVIDE PROMISES!
WHAT IS THE MAIN “PROBLEM”? 

• Popular Framing: Assumptions?
  “Feeding 9 Billion” – based on assumptions and predictions; but results in focus on technology to increase yields alone

• REALITY: There is sufficient total food produced in the world to feed all; but the food does not meet all peoples’ needs!
  ➔ MAJOR PROBLEM: Inadequate distribution and access to healthy food (IAAKSTD, 2006), tied to poverty, inequity

RETHINK ASSUMPTIONS & FRAMING!
COMPLEX HUMAN DIMENSIONS: PARADOX OF HUNGER & OBESITY

TOO LITTLE FOOD?   TOO MUCH FOOD?

WHAT KIND OF FOOD?  HOW PRODUCED?
EXTREME WASTE

40% of all edible food produced is wasted
Source: Hall et al

EXTREME WANT

1 of 6 in California are Food Insecure;
Hunger amidst plenty
(USDA)
ENVIRONMENTAL DIMENSIONS:
Climate change, water scarcity, soil degradation, pollution, biodiversity loss, energy waste

⇒ Added high costs to society
WHAT IS A KEY CHALLENGE?

REFRAMING

How to create sustainable food systems that meet all peoples’ needs?
Proliferation of terms and labels ... How to make sense of this?
WHAT IS SUSTAINABILITY IN FOOD SYSTEMS?

....means that all people have access to nutritious and affordable food that is produced sustainably and equitably, promoting health of people and of the planet.

(Adaptation from Berkeley Food Institute’s mission)

Key elements: Diversity, Justice, Resilience & Health!
Political-economic factors

Natural Resources

Knowledge & information

Social and cultural factors

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Food Systems

Producers (including processors)

Input Suppliers

Distributors & Retailers

Waste Managers

Consumers

Input Suppliers

Food Systems
WHY IS THIS FRAMING IMPORTANT?

MUST ADDRESS THE COMPLEX FACTORS THAT AFFECT PEOPLES’ DECISIONS AND ACTIONS
WITHIN THIS FRAMEWORK

HOW TO DEVELOP PROMISING FOOD SYSTEM CHANGES?

Recognize and learn from people undertaking successful efforts in food system changes
MANY POSITIVE EFFORTS to develop sustainable farming, markets changes, food access, etc. But often small, isolated, and lack cohesion.

Farmers Markets
Consumer Campaigns
School Gardens
Researchers & R&D Programs
Cooperatives
Farmers coalitions
Local Policies
Urban farming groups
Workers’ rights efforts
Right to food
Innovative local Enterprises & cooperatives
Food sovereignty efforts

and MORE

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HOW? – KEY DRIVERS OF CHANGE TOWARDS SUSTAINABILITY

Principles of Agroecology & Sustainability

Policy for the public good

Power change & Empowerment

Partnerships (in R&D and beyond)

PEOPLE (Innovators, Change-makers)

Examples follow…
1. PRODUCTION CHANGES: APPLYING PRINCIPLES OF AGROECOLOGY & SUSTAINABILITY

- Systems approach
- Biodiversity and resilience
- Soil health (regenerative)
- Ecologically pest-based management
- Resource (water, energy) conservation
- Social Responsibility (worker rights, equity, health, and right to food)

BUILD ON EXISTING SUCCESSES!
EXAMPLE: GROWTH OF *DIVERSIFIED* ORGANIC FARMING SYSTEMS - MULTIPLE BENEFITS!
EXAMPLE: CALIFORNIA WINEGRAPE GROWERS & WINE INDUSTRY – ACTIVE INVOLVEMENT IN SUSTAINABILITY EFFORTS

FROM THIS (Unsustainable) TO THIS ... (More Sustainable)
A SYSTEMS APPROACH SUPPORTED BY WINE INDUSTRY INITIATIVES

Vineyards and Ecosystem practices:
Soil, land, water conservation & ecosystem management, integrated pest management, etc.

Winery practices:
energy & water conservation, green energy, waste reduction, packaging innovations, etc.

Social responsibility:
employee safety & health, community relations, etc.
WINE INDUSTRY SUSTAINABILITY INITIATIVES BUILD ON EXPERIENCES OF PIONEERS & LEADERS

EXAMPLES: Fetzer Vineyards, and Bonterra Vineyards...
And many more!
Biodiversity conservation & enhancement
COVER CROPS
between vines have multiple ecosystem services for vineyards ("Weeds" to wealth")
SOIL HEALTH
(eg, compost, increased carbon & organic matter)
Animal Diversity
SOCIAL RESPONSIBILITY
OUTREACH AND SHARING AMONG MANY OTHER GROWERS WINERIES & STAKEHOLDERS contribute to economic benefits & broader change

LESSONS: Participatory approaches to spread successful sustainable practices
MANY WINEGRAPE GROWERS & WINERIES INVOLVED IN “GREEN” PROGRAMS

And many more examples! (through collaboration)
ADDITIONAL IMPORTANT DRIVERS (OR BARRIERS) TO CHANGE

PRODUCERS' CHANGES

- MARKET DEMAND (BUYERS)
- INSTITUTIONS & POLICIES
- LAND & RESOURCE ACCESS
- KNOWLEDGE, INFORMATION (NETWORKS)

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2. POLICY CHANGES TO SUPPORT SUSTAINABILITY AND PUBLIC INTERESTS

Policies (including Incentives) and programs to support sustainable food systems

- Existing Examples: “Know your Farmer, Know your Food,” Conservation Provisions of Farm Bill, Market Match Programs, Young Farmer & Rancher program

More Policy Changes Needed, such as:

- Dismantle existing policies that unsustainable methods
- Incentivize regional, local/direct market programs
- Protect Rights and Health of workers and consumers

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People behind policy change
3. CHANGES IN MARKET POWER?

Direct marketing and demand for “sustainably grown” products → rising consumer influence

- Challenging food market consolidation
- Strong regional/local purchasing programs
- Direct marketing innovations
- Urban farming (agroecology and food justice)
- “Sustainable” Certification programs
  - Consumer and retailers’ demands for more eco-friendly and healthy products and fair trade
Example: Rise in Direct Marketing – linking farmers with consumers

E.g, Farmers markets - over 8,000 Nation-wide (USDA)
Example of Organic Market Demand

U.S. organic food sales by category, 2005-14E

$ billion

Note: E=estimate.
Many alternative marketing & certification programs that include sustainability & justice

Niche markets?
Example: “GREEN” CERTIFICATION PROGRAMS IN CALIFORNIA WINE INDUSTRY - MARKET INFLUENCE?

Lodi Rules
- 74 vineyards
- 25.7K acres

CCOF Organic
- 278 winegrowers
- 11.2K acres

SIP Certified
- 160 vineyards
- 30K acres

Biodynamic
- 278 winegrowers
- 4K acres

Napa Green Land
- 57K acres enrolled; 32.4K certified (15.9K vineyard acres)

Napa Green Winery
- 35 wineries that produce 3.3 million cases

Green Business
- 47 wineries (including 35 Napa)

Fish Friendly Farming
- 800 farms
- 120K acres enrolled (including 57K Napa)
Certified California Sustainable Winegrowing Program Certification Participants (As of February 2015)

<table>
<thead>
<tr>
<th>Total Wineries Certified</th>
<th>78</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Vineyards Certified</td>
<td>308</td>
</tr>
<tr>
<td>Total Acres of CCSW-Certified Vineyards</td>
<td>86,668.75 (15.20% of the Calif acres)</td>
</tr>
<tr>
<td>Total Wine Cases Produced by CCSW-Certified Wineries</td>
<td>137.87 Million (57.44% of cases produced in California)</td>
</tr>
</tbody>
</table>
RISKS AND CHALLENGES:
PROLIFERATION OF CLAIMS & LABELS

• Confusion in the market!
• Who monitors & proved validity?
• Challenge to USDA “Organic”?
• Pressure on growers to meet many demands
• Efforts for harmonization are fruitless so far

• But increasing Oversight by the Federal Trade Commission could help...
Empowerment & Innovation through Knowledge and Education
4. PARTNERSHIPS
Cross-Pollination & Collaboration for Research, Education and Innovation

- Farmers Markets
- Consumer campaigns
- School Gardens
- Healthy hospital food
- Educational Programs
- New Business approaches
- Ecology
- Urban farming
- Food NGOs
- Small Farmers coalitions
- Workers’ efforts
- Local Policy Efforts – eg, Councils

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Opportunities to increase involvement of diverse groups in movements to support sustainability, food security and health
Collective Initiatives - Partnerships

Build empowerment through participatory approaches; Increase collaboration among scientists, farmers, NGOs, agencies, workers, and all people who can affect policy & practices.
Thank you – Questions?

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