Session Six

Community Sustainability
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Understanding Communities and their Dynamics

1. Basic Understanding of Community
2. Community Demographics
3. Community Economics
4. Community Power Structure
5. Community Situational Analysis
6. **Community Sustainability**
7. Community Development Process
Learning Objectives

- Understand community sustainability within the historical context of community economic development
- Gain an understanding of systems thinking and its importance to sustainability
- Become familiar with some sustainability frameworks that are science and systems based and applicable to planning and decision making
- Gain access to some relevant tools and resources
- Consider a proposed Cooperative Extension Vision for Relevance
Four Challenges Posed by Transition to Sustainability

- We need more accurate models, metaphors, and measures to describe the human enterprise relative to the biosphere.
- It will require a marked improvement and creativity in the arts of citizenship and governance.
- The public’s discretion will need to be informed through greatly improved education.
- It will require learning how to recognize and solve divergent problems, which is to say a higher level of spiritual awareness.

Three Waves of Community Economic Development

Three Waves Portion Derived from:


# Industrial Recruiting

## First Wave

### 1950s to Early 1980s

<table>
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<tr>
<th>Driver</th>
<th>Goal</th>
<th>Strategies</th>
<th>Keys to Success</th>
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<td>Export base</td>
<td>Attract outside firms</td>
<td>Financial incentives</td>
<td>Government funds for subsidies and tax breaks</td>
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<td>Industrial parks</td>
<td>Industrial infrastructure</td>
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**Industrial Recruiting 1950s to Early 1980s**

**Driver**
- Export base

**Goal**
- Attract outside firms

**Strategies**
- Financial incentives
- Industrial parks

**Keys to Success**
- Government funds for subsidies and tax breaks
- Industrial infrastructure
Second Wave

Cost Competition
Early 1980s to Early 1990s

Driver
- Efficiency and scale economies

Goal
- Retention and expansion of existing firms

Strategies
- Reduce taxes
- Deregulation

Keys to success
- Health of existing firms
- Training programs
- Social and physical resources
Regional Competitiveness
Early 1990s to Present

**Third Wave**

**Driver**
- Innovation and entrepreneurship

**Goal**
- Enhance regional resources to promote industrial clusters

**Strategies**
- Entrepreneurship
- Clusters
- Building regional collaboration

**Keys to Success**
- Distinct regional assets such as:
  - Human capital
  - Higher education
  - Amenities
  - Creative economy
- Leadership and development of quality environment
- Bridging economic and community development
Community Sustainability
Early 1980s and Still Evolving

**Fourth Wave**

**Drivers**
- Sustainable development
- Systems thinking

**Goal**
- Sustainability

**Emerging Strategies**
- Green collar jobs
- Alternative energy sources
- Valuing ecosystem services
- Local food systems
- Sustainable (eco) tourism
- Triple bottom line business
- Industrial ecology
- Precautionary principle
- Eco-municipalities
- Transition towns
Summary “Wave” Points

**First Wave**
- External focus, business and industry
- Physical infrastructure

**Second Wave**
- Internal focus, business and industry
- Training and social resources

**Third Wave**
- Internal focus, human and social capital
- Community and economic development

**Fourth Wave**
- Holistic focus: human, social, and natural capital
- Economic, social, and ecological relationships
“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

**Intergenerational Equity**

“It contains two key concepts: the concept of “needs,” in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs.”

Intragenerational Equity & Limits
Evolving Views of the Community

- Unconnected or silos view
- Interconnected or linkages view
- Interdependent, nested, or systems view
Community Capitals Framework

- Built Capital
- Financial Capital
- Political Capital
- Social Capital
- Human Capital
- Cultural Capital
- Natural Capital

Healthy Ecosystem
Vital Economy
Social Well-Being

Source: Cornelia Butler Flora, North Central Regional Development Center, 2004
The Five Capitals Framework

Source: Forum for the Future
What Is a System?
Conventional Thinking

Traditionally, we try to understand complex systems by reducing the whole and studying the individual parts.

This is called reductionist thinking.

Source material from TNS Canada
But…

We know that the properties of systems depend on the *relationships* between the parts as much as the parts themselves.

When you *dissect* the system, you destroy the pattern of relationships.
Systems Thinking

We must look at the whole ...

... and not get stuck on details

Source material from TNS Canada
Solar Energy

Finite Global Ecosystem

Empty World

Source Functions
- Energy
- Resources

Growing Economic Subsystem

Sink Functions
- Energy
- Resources

Economic service

Recycled Matter

Waste Heat

Natural Capital (Ecosystem)
Manmade Capital (Economy)

Source: Daly, Herman. *Ecological Economics.* Island Press, 2004
Major Categories of Ecosystem Services

**Supporting**
- Nutrient cycling
- Soil formation
- Primary production

**Provisioning**
- Food
- Freshwater
- Wood and fiber
- Fuel

**Regulating**
- Climate regulation
- Flood regulation
- Disease regulation
- Water purification

**Cultural**
- Aesthetics
- Spiritual
- Educational
- Recreational

Growth Trends Summary: Past Two Centuries

- **Population**
  - sixfold

- **Energy use**
  - eightyfold

- **Economy**
  - sixty-eight fold

“It took all of human history for the global economy to reach the 1950 level of over $5 trillion; in this decade, the world economy expanded that much in a single year.”

Growth Trends Summary: 1950 to 2000

- **Population**
  - more than 2X

- **Economy**
  - 7X

- **Food consumption**
  - 3X

- **Water use**
  - 3X

- **Energy use**
  - 4X
Solar Energy

Finite Global Ecosystem

Full World

Growing Economic Subsystem

Energy Source Functions

Resources

Energy Sink Functions

Resources

Recycled Matter

Ecosystem service

Welfare

Natural Capital (Ecosystem)

Manmade Capital (Economy)

Waste Heat

Source: Daly, Herman. *Ecological Economics*. Island Press, 2004
Key Science-based Analyses

Millennium Ecosystem Assessment (2005)
► Two-thirds of ecosystems and their services are degraded or being used unsustainably.

Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC 2007)
► The Earth is warming.
► Humans play a significant role.
Conceptual Reform: Seven Big Ideas in Economics

- Adjust economic scale
- Shift from growth to development
- Make prices tell the ecological truth
- Account for nature’s contributions
- Apply the precautionary principle
- Revitalize commons management
- Value women

Community Development

- A group of **people** in a **locality**
- Initiating a social action **process** (i.e., planned intervention)
- To **change** their economic, social, cultural, and/or environmental situation
A Growing Movement

Community Stories
Swedish Eco-Municipalities

An eco-municipality aspires to develop an ecologically, economically, and socially healthy community for the long term, using The Natural Step Framework for sustainability as a guide, and a democratic, highly participative development process as the method.
The Natural Step

The Natural Step is an international non-profit research, education and advisory organization that uses a science-based, systems framework to help organizations, individuals and communities take meaningful steps toward sustainability.

Source material from TNS Canada
The Natural Step Framework

A science- and systems-based definition for sustainability

A decision-making framework and process to help organizations and communities plan for sustainability

A shared language provides a compass to help us know if we’re moving in the right direction

Source material from TNS Canada
Resource availability and ecosystem ability to provide vital services

Raw materials, ecosystem services, declining integrity and capacity of natural systems

Margin for Action

Sustainability

Societal demand for resources

Growth in population, resource requirements as affluence increases, increased demands as technology spreads.

Ways We are Un-sustainable

1. We dig stuff *(like heavy metals and fossil fuels)* out of the Earth’s crust and allow it to build up faster than nature can cope with it.

2. We create man-made compounds and chemicals *(like pesticides and fire retardants in carpets, etc.)* and allow them to build up faster than nature can cope with them.

3. We continuously damage natural systems and the free services they provide *(including climate regulation and water filtration)* by physical means *(for example, overharvesting and paving wetlands)*.

4. We live in and create societies in which many people cannot meet their basic needs *(for example, affordable housing)*.

Source material from TNS Canada
Basic Conditions for Sustainability

In a sustainable society, nature is not subject to systematically increasing:

1. Concentrations of substances extracted from the earth's crust
2. Concentrations of substances produced by society
3. Degradation by physical means

and, in that society…

People are not subject to conditions that systematically undermine their capacity to meet their needs.

Source material from TNS Canada
The Natural Step Planning Framework

“D” Step

- Right direction?
- Flexible Platform?
- Return on investment?

Baseline analysis
based on system conditions

Awareness
Sharing the framework

Down to action

Compelling vision
of the future

Source material from TNS Canada
The A-B-C-D Process

**A** Awareness

**B** Baseline

**C** Creative Solutions

**D** Decide on Priorities

Does it move us in the right direction?
Is it a flexible platform?
Is it a good return on investment?

Source material from TNS Canada
Who Uses It?

Swedish Eco-municipalities

Source material from TNS Canada
Eco-municipality Steps to Success

1. Finding the Fire Souls
2. Providing initial education/raising awareness
3. Obtaining official endorsement
4. Involving the implementers
5. Applying the ABCD planning process
6. Getting the whole plan endorsed
7. Keeping it going (institutionalization)
Study Circles

• Groups of 8 to 12
• Eight weeks
• Ninety minutes sessions
• Participant facilitated
• Study guide available

Sustain Dane
Natural Step Resources

www.naturalstep.org
Toward a Sustainable Community:
A Toolkit for Local Government

Posted as pdf:
www.shwec.uwm.edu

Direct link:
www.shwec.uwm.edu/sustk
Content of Toolkit

• Premise → Local government can lead by example
• Focus on the internal workings of local government
  ✓ Energy
  ✓ Buildings
  ✓ Procurement
  ✓ Transportation
  ✓ Human resources
  ✓ Investment
• Provides ideas and specific actions
  ✓ Local government transformation
  ✓ Model of sustainable practices
Steps to Move toward Sustainability

1. **Convene** a task force, committee, study group, green team, etc.
   - Wide representation
   - Assessment, identify opportunities, vision and goals
   - Develop recommendations for consideration by elected officials

2. **Commit** to becoming a sustainable community through a formal resolution

3. **Adopt** a guiding principle or framework for sustainability

4. **Establish** a standing committee or advisory board to oversee implementation and to further develop a strategic sustainable community plan
Steps to Move toward Sustainability, Continued

5. **Establish** a department, reconfigure existing departments, or appoint or hire a director of sustainability

6. **Educate** and **train** staff and officials across departments about sustainability

7. **Establish** demonstrations
   - Existing or new projects
   - Provides experience
   - Allows leadership to show progress and successes
   - Provides local models
Steps to Move toward Sustainability, cont.

8. **Adopt** full cost accounting
   - Front-end costs
   - Direct and indirect daily operating costs
   - Back-end costs such as closing a facility or program, post-closure care and monitoring

9. **Measure**, **track**, **record**, and **report** results
   - Sustainability indicators

10. **Publicize** and **celebrate**
General Sustainability Resources – Books


General Sustainability Resources – Books


General Sustainable Business Resources


A Vision for Relevance

• **Question:** Should Cooperative Extension galvanize and lead a public shift to sustainability in response to climate change?

• **Answer:** The time is NOW for Extension to engage individuals and communities for environmental stewardship, through Sustainable Living Education.

Essential Steps to Engage with Sustainable Living Education

A. Educational programs must be **multidisciplinary**.

B. Educational programs must **holistically** address the total energy, water and carbon footprint of the lifestyle choices of our stakeholders.

C. Educational programs **must take place now** – with in-service and other professional trainings for our existing workforce.

Essential Steps to Engage with Sustainable Living Education

D. Educational programs must focus on how choices, decisions and behaviors affect natural resources, equity, and economic development at the local, regional, national and global scales.

E. Extension must be the model for others to emulate. We have to walk our talk.

F. With success at the personal and family level, and a constituency ready to effect community change, Extension can help communities rethink their municipal systems that constrain our options for living sustainably.

Questions?

Comments?
Looking Ahead

Community Development Process

Deborah Tootle
University of Arkansas

November 10 and 11
Evaluation

• Please complete the evaluation on this presentation located on the web site