Living labs and Ecomuseums: integrating sustainability in higher education

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Sustainable Development:
the global response to managing the challenges

- environment
- economic
- social/culture

Sustainable Development

Plus concepts of:
- Intergenerational responsibility
- Need verses greed/equity
- Social justice, etc
Concepts Within SD

- Not anti-development in general but “precautionary principle” based
- Not prescriptive
- More a GPS showing where we are and the options
- But we must select the general destination
- SD is about learning and making wiser choices
The 4 Major Thrusts of ESD (Education, Public Awareness, and Training)

1. Access to and retention in a quality education
2. Reorienting existing education to address sustainability
3. Public awareness and understanding of sustainability
4. Training programs for all sectors to address sustainability

Agenda 21 -92, UNESCO-96, UNCSD -98, JPOI-2002
### UNU Regional Centres of Expertise

#### Messengers

<table>
<thead>
<tr>
<th>Non Formal</th>
<th>Formal</th>
<th>Informal</th>
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</thead>
<tbody>
<tr>
<td>Ngo’s</td>
<td>Tertiary</td>
<td>Media</td>
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<tr>
<td>Zoo/etc.</td>
<td>Secondary</td>
<td>Peers</td>
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<tr>
<td>Gov. Agencies</td>
<td>Elementary</td>
<td>Society</td>
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<tr>
<td>Corp Training</td>
<td>Preschool</td>
<td>Life Exp.</td>
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#### Local Information

<table>
<thead>
<tr>
<th>Sources</th>
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<tbody>
<tr>
<td>Regional/National</td>
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<tr>
<td>Local Government</td>
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<tr>
<td>Private Sector</td>
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<tr>
<td>Research (HE, NGO) etc.</td>
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#### Outcomes

- Improved academic outcomes
- More knowledgeable/supportive citizenry
- More sustainably oriented production and consumption
- Perhaps a shift in behaviour as learning is relevant and in scale etc.
- Process is crucial
RCEs - A Global Initiative

Regional Centres of Expertise on Education for Sustainable Development

RCEs around the world

www.ias.unu.edu/efsd

For more information:
The Global RCE Service Centre
Education for Sustainable Development Programme
United Nations University – Institute of Advanced Studies (UNU-IAS)
Yokohama, Japan
rceservicecentre@ias.unu.edu

WORLD CONFERENCE
Education for Sustainable Development

Aichi-Nagoya, Japan
10-12 November 2014
Priority action areas

1. Advancing policy
2. Transforming learning and training environments
3. Building capacity of educators and trainers
4. Empowering and mobilizing youth
5. Accelerating sustainable solutions at local level
Global Action Programme

Where do we stand?

"We resolve to promote education for sustainable development ... beyond the United Nations Decade of Education for Sustainable Development."

- Increased presence of ESD internationally and nationally.
- Major challenges:
  - from pilot to policy
  - from small scale to large scale
  - from margin to mainstream
- A Global Action Programme to scale up ESD.
Role of Higher Education

3% - 80%
Responsibility/response
Systemic Approach

Curricula

Engaging the university in sustainable Development

Service

Research

Operations

HR Policy
Sustainability in HE Culture

- **Education & Research**
  Curriculum reorientation
  Community service/engagement (faculty/students)
  Research foci

- **Campus Operations**
  Climate change consideration (buildings, purchasing...)
  Energy, water, waste
  Transportation
  Maintenance – Grounds, buildings

- **Planning, Administration & Engagement**
  Human Resources – hiring, promotion
  Assessments & Ratings
  Coordination & Planning
  Diversity & Inclusion
  Funding
  Endowments and Investments
Potential “Living Labs” and “Ecomuseums” are Everywhere

- The university itself
- Urban Neighbourhoods
- New subdivisions
- Traditional communities
- Indigenous communities
- Cultural heritage sites
- Industrial sites
<table>
<thead>
<tr>
<th>Bloom’s Taxonomy and ESD</th>
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<tbody>
<tr>
<td><strong>1</strong></td>
</tr>
<tr>
<td>Knowledge</td>
</tr>
<tr>
<td>Remember previously learned information</td>
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<tr>
<td>Define the principles inherent in sustainable development</td>
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</table>
A scale that Higher Ed can manage

## Potential Opportunities

<table>
<thead>
<tr>
<th>Living Labs/Ecomuseums</th>
<th>Issues</th>
<th>Stakeholders</th>
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<tbody>
<tr>
<td>Creating Vision</td>
<td>Local/Global</td>
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<td>Buy-in</td>
<td>Approachable</td>
<td></td>
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<tr>
<td>$$$$</td>
<td>Beneficiaries</td>
<td></td>
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<tr>
<td>Control</td>
<td>Local Actors</td>
<td></td>
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<tr>
<td>Causality</td>
<td>Knowledge</td>
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Unique filter e.g. Biomimicry TEK

Knowledge Understanding

Commerce

Societal Well-being
MISSION

"Mino-pimatisiwin"

Teaching, applying, modelling and sharing First Nation knowledge, values, beliefs, practices and ideals in promoting sustainability in First Nation schools with guidance by elders, First Nation educators and land-use practitioners for the purpose of preserving Mother Earth for future generations.
Aboriginal Learning Knowledge Centre: Métis Holistic Lifelong Learning Model
Australian Aboriginal 8-way Learning

- Story sharing
- Learning maps
- Non-verbal
- Symbols and images
  - Land links
  - Non-linear
- Deconstruct/reconstruct
  - Community links
Knowledge framework

Scope/applications
- attempts to explain the nature and existence of humanity for a particular group of human beings
- incorporates a diverse range of systems including Inuits, Aymara Indians in Bolivia, Romani people and more

Concepts/language
- role of language in the knowledge system, for example storytelling
- use of metaphor and analogies
- maintaining traditions through written language
- oral traditions are dying because they are not written down
- conventions: role of elders, importance of group over individual
- key concepts: nomad, concept of home, honour, ownership
Methodology

- oral tradition handing down through the generations—role of memory
- ritual—shared emotion
- folklore
- music
- artefacts
- systems of reason
- explaining observed natural phenomena as being part of a total worldview—role of sense perception

Historical development

- impact of colonialization and globalization

Links to personal knowledge

- understanding the self—ancestry, place in the world, attitudes and behaviour towards others
- elders personally contributing to the form of the knowledge system
- collaboration: the enactment of ritual and tradition gives the possibility through a group effort of reinforcing the system of knowledge
- ancestral knowledge linked to the personal
Indigenous Wisdom
Step 1 - Individual Behaviour Change (IBC)

\[ IBC = A + M(m_1 + m_2 + m_3 + m_4 + m_5 + m_6 + m_7 + m_8) + K + O + Sk + R + E + C(c_1 + c_2 + c_3) + Gu \]

Step 2 - Shifting Societies (SS)

\[ SS = IBC + Rew + Me + C \, Sq + Pw + G - + IC \]

**M- Motivation**
- m1 – commitment
- m2 – accountability
- m3 – relevance
- m4 – better, easier, etc.
- m5 – values alignment
- m6 – deemed helpful
- m7 – belief
- m8 – believed to be doable

**C – Cultural acceptance**
- c1 - societal
- c2 – institutional
- c3 – individual level

- K – knowledge
- O – opportunity
- A – awareness
- R – resources
- Sk – skills
- Rew – rewards (perceived)
- Me – meaningfulness
- C 2 – Cultural accept (squared)
- Pw – Political will
- G – Governance
- Ic – International collaboration
- E – ease
- Gu – Guilt