International Association of Universities (IAU) Cluster on Higher Education & Research for Sustainable Development:
How Higher Education can Contribute to Responsible Consumption and Production

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Presentation Overview

1. Sustainable Development, Education for SD and the UN Sustainable Development Goals
2. The International Association of Universities HESD Cluster
3. Defining Responsible/Sustainable Consumption and Production (SCP) & the SDG 12 Targets
4. A Whole Institution & Cultural Approach to HE Consumption and Production
5. Strategic New Technologies and Scholarly Identities in Universities
The Global Goal of **Sustainable Development**

- **What is SD?**
  - World Commission on Environment and Development *Our Common Future* (“The Brundtland Report”), 1987
    - Sustainable Development (SD): “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED p. 43).
  - *Caring for the Earth* (1991)
    - Sustainable Development: “improving the quality of life while living within the carrying capacity of supporting ecosystems” (IUCN, UNEP, and WWF p. 7).
Alternative Definitions of Sustainable Development:

- “Living on the planet as if we intended to stay”
- “Enough, For All, Forever”
- “In every deliberation, we must consider the impact on the seventh generation... even if it requires having skin as thick as the bark of a pine.”
Sustainable Development, Capital, and the New Bottom Lines: Impartially Judging Existing (and Possible) Production Choices

- **Multiple production systems** (Market and Non-Market)
- **Diverse market forms** (for-profit, cooperative, state enterprise)
- **Diverse scales**

Two key goals of SD (WCED 1987, p. 43):

**Human Capital**: meet essential needs of poor (& vulnerable, & aspirations, & quality of life, & human capabilities, & well-being)

**Natural Capital**: environmental limits/carrying capacity/ services, resilience & healthy ecosystems

Possible Production Processes

Early SD Outcomes/Bottom Line
Education *for* Sustainable Development: ESD

- Education *for* Sustainable Development “allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future”. (UNESCO 2013)
  - **Education** a deliberate focus on *labour*: investing in human beings/human capital
  - ESD includes: **higher education** & other formal, non-formal, and informal education
  - ESD is **transformative**: includes sustainable lifestyles/livelihoods

ESD Displays in Okayama, Japan
U.N. and Education for Sustainable Development (ESD)

- 1992 *Earth Summit* recognizes critical role of education in achieving sustainable development (SD)
  - Chapter 36 of *Agenda 21* addresses reorienting formal and non-formal education towards sustainable development


Dr. Charles Hopkins, Key Author of Ch. 36
Four Major Educational Components for Decade on ESD (UNESCO)

1) improve access to quality basic education
2) reorient existing education to address sustainable development
3) develop public understanding and awareness of sustainable development
4) provide training programs for all sectors of private and civil society
The UN Sustainable Development Goals (SDGs) and Agenda 2030: 2015-2030
Universities and the Sustainable Development Agenda: Background on International Association of Universities

- **Created in 1950** under the auspices of UNESCO
  - An official UNESCO partner
- Goal: “Building a **worldwide higher education community**”
  - Membership-led Higher Education NGO (650 HE institutions in 130 countries)
- IAU General Secretary (or rep.) **attending United Nations University (UNU) ESD Conferences**
- UNU presenting **at IAU 2018 International Conference** in Malaysia (November 2018)
International Association of Universities (IAU) Higher Education and Research for Sustainable Development (HESD) Cluster

“The IAU Cluster on HESD promotes the role that Higher Education Institutions globally have to fulfill in order to achieve the SDGs and Agenda 2030. Universities are to address the SDGs, which themselves impact on and transform universities. The Cluster encourages a holistic approach to the SDGs, focusing specifically on the whole institution approach.”

Initial Lead Universities for each SDG in 2018

2019 Update:
Member Universities of SDG 12 IAU Sub-Cluster
Defining Responsible/Sustainable Consumption and Production (SCP)

SCP (a widely accepted early definition): “the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations.”

Responsible Consumption and Production (SDG 12)

UN Targets:

1. Implement **10 Yr Framework Programme** on SCP
2. Sustainable management/use of **natural resources**
3. Halve **retail & consumer food waste** & food chain losses
4. Environmentally sound management of **chemicals**
5. Reduced **waste generation**
SDG 12 UN Targets (continued)

6. **Corporate** sustainable practice and reporting  
7. SD in **public procurement**  
8. **Public awareness** of SD and Sustainable Lifestyles  
   A. Support **developing countries’ science & tech** for SCP  
   B. Tools for monitoring **sustainable tourism**  
   C. Rationalize **inefficient fossil fuel subsidies** & mitigate adverse impacts
SDG 12 Issue Review at HLPF in New York, July 12, 2018 (Delia, 2018):
• SDG 12 is “at the heart and soul” of the 2030 Agenda
• Steady State, Circular/Cradle to Cradle (vs. linear) Economy
• Challenges facing small island states & LDCs; raw material overuse by developed countries
• Lack of monitoring framework for SDG 12 targets and lack of transparency of sectors (e.g., extractives)
• Electronic and plastic waste
• Make a sustainable lifestyle easy
Inaugural Conference of IAU Cluster on SDG 12

- Held at Luther College (Regina, Canada) & U. Regina Funding: "Advancing Responsible Consumption and Production in Higher Education" (May 6-7, 2019)
  - Regional participation of Saskatchewan's HE organizations, community practitioners, SDG 12 Satellite Universities, and IAU
- Video and PPT Presentations Available:
  - [https://www.luthercollege.edu/university/alumni-friends/events/iau-sustainable-development-goal-12-inaugural-conference](https://www.luthercollege.edu/university/alumni-friends/events/iau-sustainable-development-goal-12-inaugural-conference)
Strategic Conference Dimensions:

- **Whole Institution & Cultural Approach** to Conference:
  - academic and administrative conference funding
  - representatives from across HE (faculty & faculty association, administrative staff, students, and board members) & community

- **Combing Theory & Practice, Global & Local**
  - SDG 12 principles and values & practical efforts in production & consumption:
    - (1)energy, (2) shared equipment, (3) sustainable food, (4) sustainable livelihood and lifestyle, (5) education for SCP, (6) financing and procurement, (7) SDG 12 indicators, and (8) engagement with policy makers and communities
  - Employ UN SDG 12 Targets & Local University SDG challenges
Culture and SDG 12 Figure 8 Symbolism

**N. American Indigenous:**
Spider and infinity, Balance, Past shaping future, Gentle strength

**Egyptian Ouroboros:**
Disorder needed for periodic renewal, Eternal unity

**European Cards:**
Creatively combining elements; Limits of world on acquisition

**Canadian Métis:**
Joining of two cultures; Existence of a people forever

**RCE Saskatchewan:**
ESD combining long temporal & spatial horizons for focussed action

**SDG 12:**
Circular economy
A Whole Institution & Cultural Approach to Production and Consumption: Multiple Organizational Types

- Not-for-Profit/NGO
- Government
- Cultural and Religious
- Academic
- Business
- Aristocracy/Craftspeople/Professions
- Family
SDG 12 and Organizational Culture: Multiple Organizational Types and Production Systems

Not-for-Profit/NGO & Volunteerism

Government & Taxation and Centralized Disbursement

Cultural and Religious & Charity/Benevolence; Ceremonies

Academic & Curiosity Driven Methods for Discovery

Business & Private Market Transactions

Aristocracy/Craftspeople/Professions & Specialized Reciprocity

Family & Household Production (food/clothing/shelter)
A Whole Institution & Cultural Approach to SDG 12: Old and New Production Systems Within the University

- **Volunteerism**: Faculty Service (e.g., Committees/Community); Student Volunteer Placements; Open/Free Publications

- **Private market**: Finance Offices, Budget Committees, Industry Partnerships, Consulting, Bargaining & Faculty/Students Unions

- **Centralized Administration and Disbursement**: Presidents’ Office, Deliberative Councils, Departmental/Disciplinary Chairs, Students Union Presidents

- **Professions/Peers/Friends**: Collegial Governance, Peer Review, Faculty Ranks, Academic Conferences, Student Clubs and Societies, Academic Awards

- **Cultural/Religious**: Matriculation/Graduation Ceremonies, Sabbaticals, Research/Academic Ethics Boards

- **Family/Household**: Home Departments, Student Residences
Organizations and Initial Focus of Resource/Capital Use

**Focus:** Human and Natural Capital

- Not-for-Profit & Volunteers
- Government & Citizens/Subjests
- Cultural/Religious & People(s)/Believers
- Academic & Scholars

**Focus:** Physical Capital/Artifacts

- Business & Factories/Goods/Transports
- Professions/Craftspeople & Workshops/Tools
- Family & Home/Hearth/Furnishings

An expanded role in SD for NGOs/Volunteerism?
Universities Embracing Newest Voluntary Model & Human Capital to Produce Resource Surpluses

- **Academic freedom** a core value of universities
  - Even in countries where freedoms limited

- Allows **faculty, staff, students, administration, and alumni** to freely collaborate around scholarly causes & new methods

- Can then **invent (reinvent) technologies for Responsible Consumption and Production**
  - Customize to local livelihoods and ecosystems
Volunteerism and University Creation of 168 Regional Centres of Expertise on Education for Sustainable Development

http://www.rcenetwork.org/portal/rces-worldwide
Strategic Focus on Historically Transformative Innovation

**Focus:** Embrace Opposite Physical Capital
- Not-for-Profit/NGO: Free/Open/Shared Equipment Libraries(?)
- Government: Money

**Cultural & Religious:** Bow and Arrow

**Academic:** Fire and Heated Materials

**Embrace Opposite Human/Natural Capital**
- Business: (Scientific) Management
- Professions/Artisans/Crafts: Friendship
- Family: Kinship

Earlier Innovations are *Reinvented* using Newest Production System...
Possible New/Reinvented Technologies

- **Tool Libraries:**
  - **Repositories of shared equipment** (laboratory & engineering equipment, fine arts & media, gardening, sports & recreation/games, facilities management, printing)

- **Money:**
  - **Not-for Profit Currency** exchanged between universities for scholarly and sustainability goals (e.g. scholarly

- **Friendship:**
  - Human: **Innovation in peer review** including contributions to SDGs (research, teaching, impacts on scholarly and wider community)
  - Plants: New forms of plant domestication (e.g. companion planting) on campuses
Central Role of Universities in Production Transitions

• Industrial Revolution and Role of Science
  – The Royal Society of London (1660 C.E.)

• Rise of State Administrations and the Role of Humanist Colleges
  – The Trilingual College of Leuven (1517 C.E.)

• Role of Newest System (Volunteerism) in University Innovation (see Petry 2012, 2014)
  – Regional Centres of Expertise (RCEs) on ESD; IAU HESD Cluster
Altering Material Production Inputs: Moving Beyond Inputs Minimizing Labour/Human Capital

- 5 manufacturing industries noted for their high energy and physical capital use and low labour inputs (Michael Renner 1991):
  - primary metal
  - paper
  - oil refining and coal products
  - chemicals
  - stone, clay, glass

- Account for 80-85% of energy use/toxics released in U.S. manufacturing, 21% of energy consumed, and only 3% of jobs (Renner 1991)
Universities Embracing Collegial Governance/Human Capital to Produce & Consume Different Materials

- Universities with collegial governance: one of the few examples of “worker cooperatives” (Jean Tirole, *Economics for the Common Good*, 2017)

- Scholarly self-ownership allows input balance: not minimizing labour

- Allows innovation with new materials requiring higher human capital/labour inputs
Sustainable Livelihoods (SL) Framework to Integrate Production and Consumption *into a Single Identity*

**Sustainable Livelihoods Framework**
(UN FAO Citing DFID, 2000; see Ian Scoones 2015)
Faculty Associations Building A New *Scholarly Identity* Around Each Having a Sustainable Livelihood

**Sustainable Livelihoods Framework**

**Individual Scholarly Identity:**
Promoting Academic Freedom through Sustainable Livelihoods

**Organizational Identity:**
Promoting Autonomy & Inter-University Cooperation through Sustainable Livelihoods