Sustainable production and consumption in low carbon communities – an Asian perspective

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SCP Area, IGES, Japan
• Why Asia?
• Why SCP now?
• Case study of community practices in Asia
• IGES’s engagement in SCP-related initiatives
Why Asia?
Resource use in AP dominates global use...

Year 2010
Material use
Unit: million tonnes

Asia-Pacific
53% 36,940 million tonnes
56% 3,831 million people
25% 13 trillion dollar

The rest of the world
47% 32,991 million tonnes
44% 3,070 million people
75% 38 trillion dollars

China 23,591
India 5,022

Developing country
Industrialized country
The rest of the world
Building a SCP Regional Roadmap

International and regional frameworks for SCP
SDGs, 10YFP, SWITCH-Asia, ASEAN, SACEP

Regional Roadmap
- aligns with International frameworks to support national implementation

Past initiatives on SCP
- APRSCP
- SWITCH-Asia
- 10YFP RR

National SCP Implementation
- With inputs from regional, past, and international frameworks

Timeline:
- 2011
- 2014-2015
- 2016
- 2021
- 2022
- 2030
Why SCP now?
Evolution of SCP concept

<table>
<thead>
<tr>
<th>End-of-pipe (1970s) to Cleaner production (1980s)</th>
<th>From efficiency (1990s) to life-cycle approach (2000s)</th>
<th>Sufficiency approach</th>
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</thead>
<tbody>
<tr>
<td>• From reactive to preventative measures&lt;br&gt;• From acute to chronic problems and sources of impacts&lt;br&gt;• From single-pollutant or single-media to multimedia and multi-impact pollutants&lt;br&gt;• From site-specific to supply chains&lt;br&gt;• From throughput to material cycles</td>
<td>• From production orientation to product life-cycle orientation&lt;br&gt;• From single-company search to life-cycle-wide search for solutions&lt;br&gt;• From consumers as objects to consumers as agents&lt;br&gt;• From adversarial stance to partnerships&lt;br&gt;• From regulation to voluntary initiatives</td>
<td>• From supply chains to value chains&lt;br&gt;• From green consumerism to sustainable consumption/lifestyles&lt;br&gt;• From focus on technical fixes to include social transformation&lt;br&gt;• From national level implementation to transnational approaches&lt;br&gt;• From growth to well-being (…almost)</td>
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Case-study of community practices in Asia
National Government

Local Governments

Policy promotion
Sustainable infrastructure

Sustainable production/trade
Programme which requires coordination among different businesses

Activation of grass-roots sustainability activities

Civil society organizations/NGOs

National level Programme in collaboration with businesses

Citizens/Consumers

Businesses
Objectsives:
To clarify the “conditions” to promote the SCP/SDGs-related initiative at the community level

Questions:
Linkages between local awareness/concern on sustainability issues and actions;
Interaction between local and national/global actors;

- **Chiang Rai (01/2016)**
  - Organic farming for landless farmers
  - Low Carbon House Awards

- **Vientiane (01/2016)**
  - Bio-gas plant experiment at student dorm / peri-urban guesthouse

- **Da Nang (12/2015)**
  - Large-scale pig farm: utilization of biogas
  - Small-scale pig farm: use of food waste by restaurants
  - “No blackout” house

- **Khon Kaen (01/2016)**
  - Community waste treatment and recycling
  - Recycling of wasted cooking oil as cosmetics/biodiesel by the aged group and University
  - Organic farm and green market

- **Higashiomi (06/2016)**
  - Canola Flower Project
  - Welfare mall
  - Niche industry by young people
  - Freemasonry
Highlights of observation

1. Most initiatives were begun out of concern different from environmental sustainability;

2. Initiatives reframe the challenges & resources;

3. Various initiatives for diverse challenges are working concurrently, where local sustainability are actively practiced;

4. Local “loops” are created, but not bounded to “the local”
Observation 1:
Out of diverse & unique concerns

- Non-blackout house for “Adaptation” (Danang)
- Organic farming for landless farmers (Chiang Rai)
- Recycling cooking oil and biodiesel for health & community revitalization (Khon Kaen)
Observation 2:
Reframing and Reconfiguration

- Higashi-omi: From “Soap Movement” for lake cleanup to Canola Flower Project for local resource circulation & energy supply
1976 Water pollution

1980
- Oil shock
- With the spread of non-phosphorus synthetic detergent, the need of soap decreased; Collected waste cooking oil lost the market.

1998
- Shift to renewable energy utilization.
- Expansion of collection of recyclable waste
- Canola Flower Project (Yellow Revolution) started in 1998.
- Constructing of regional model of resources circulation
- Learn about German’s colza oil fuelization planning in 1992.
- Received the subside by the National Environment Agency and Shiga-ken in 1996.

2004
- “Local production for local consumption” of food & energy.
- “Autonomy” and "independence"
- Rapeseed cultivation could eligible for the grant-in-aid under the policy of reducing the production of rice since 2004.
- “Aitou Eco-plaza of Canola Flower” opened as a regional sustainable development center in 2005, which is financially by the Ministry of Agriculture, Forestry and Fisheries.

Scale
- From lake conservation to waste cooking oil collection
- Higashiomi - the historical transition of environmental practices

“Aitou Eco-plaza of Canola Flower” opened as a regional sustainable development center in 2005, which is financially by the Ministry of Agriculture, Forestry and Fisheries.
Khon Kaen, Thailand - network of urban organic farming

**Central Government**
- Strategies for low carbon society

**Local Government**
- 4 Strategies for sustainable society
  - “Large trees”
  - Green heart of next generation
  - Minimizing waste
  - Energy efficiency

**Network of urban organic farming**
- 11 municipal school
- Green Market each Friday
- Full-time farmer
- Volunteer/Kitchen gardener

**For the health of the citizens**
- To ensure the health of the citizens
- Check the quality
- Certification of the world standard

**For marketing, health and yield**
- For the health of family.
- Organic Food

**For marketing, health and yield**
- Organic Food

**Initiated by the local government, but driven by the communities.**
- Third trial to success: NGO’s attempt -> fail KK city’s policy -> fail KKC & NGO -> gradually spreading
- Under the strong leadership of current mayor for improving environment, various initiatives are working.

**Consultants**
- 11 municipal school
- Full-time farmer
- Volunteer/Kitchen gardener
- Green Market each Friday

**Central Government**
- Strategies for low carbon society

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Observation 3: Concurrent initiatives for diverse challenges

• Higashi-omi: Citizen’s movements cheered by the city office
  • Welfare mall: local food / energy production and consumption and employment of handicapped
  • Better utilization of local woods
  • Farm stay
  • Citizen’s power plant
  • “Soyori” (town gathering for exchange / collaboration)

• Khon Kaen: City government arouses community actions
  • Street planting;
  • Green market; & other “organic” villages
  • Community-university collaboration for recycling of cooking oil
  • Community based waste treatment and recycling...
Higashiomi - Canola flower & various initiatives

Canola Flower Project (Yellow Revolution) (http://www.nanohana.gr.jp/?page_id=39)

- Planting
- Harvesting
- Expressing
- Oil supply/Consumption
- Collecting
- Recycling
- Compost
- NPO Cooperation
- School, household, restaurant
- Consumer learning group
- NPO Cooperation
- Partnership network of citizen, organizations, agencies and etc.
- Local revitalization - Reconstruction of agriculture - Eco-tourism...
- Creation/exchange of knowledge, wisdom and know-how.

Natural capital ↑
- Regeneration of mountain
- Regeneration of farmland
- Watershed conservation
- Natural energy

Social capital ↑
- Manufactured capital
- Eco-plaza
- Oil mill & wasted-oil disposal facility
- Provide job opportunity
- Citizen participation
- Regional contribution
- Natural energy
- Creation/exchange of knowledge, wisdom and know-how.

- Human/
Observation 4: 
Local “loops” created, but not bounded

• Reconnecting the “loop”
  • Resources – Production – Distribution – Consumption (urban organic farm)
  • Waste – resources (biodiesel etc)
• Reconfiguring “resources”
  • Unused land for energy production

• But “loops” are not locally bounded
  • Seeking for political/financial support
  • Marketing for outside customers;

• Local challenges and actions are: dynamic interactions among local concerns, resources, global/national agenda and political & financial support
Reconsidering the question:
Concurrent sustainability initiatives: keys for local sustainability?

• Can accept various ways of participation;
  • Full-time / part-time
  • Practitioner / business owner / consumer / government officials;

• New ideas/synergies among various initiatives

• Can reframe & reconfigure for changing conditions;

• Accumulating capacities for aspiring to alternatives:
  • Mobilisation of local/outer resources
  • Trust with local governments / among practitioners / citizens
Reconsidering the question:
Concurrent sustainability initiatives: As a research topic?
• Capturing “concurrent” initiatives and detailed analysis
  • Drawing the perspective of the local concurrent initiatives
  • Detailed analysis of specific initiative(s)

• Comparison between similar initiatives with difference
  • Concerns, available resources, outputs
  • Possible case: Bioenergy in Higashiomi, Khon Kaen and Danang?
    Diverse movements of organic farm(s) in Khon Kaen

• Comparison between cities
  • Ways of communication among different initiatives
  • Available resources (natural, human, financial, technological, political);
  • Possible case: Higashiomi and Khon Kaen (and Surabaya?)
IGES’s engagement to SCP initiatives and research
Accelerate the shift towards SCP in all countries by supporting regional and national policies and initiatives.

Increase resource efficiency and decouple economic growth from environmental degradation, creating decent jobs and contributing to poverty eradication.

Support capacity-building and facilitate access to financial and technical assistance for developing countries, to implement sustainable consumption and production (SCP).

Serve as an information and knowledge sharing platform on SCP to enable all stakeholders to exchange policies, tools, initiatives and best practices on SCP.

NEW!! Sustainable Food Systems
10YFP SLE projects

**Chile**: Direct use of geothermal energy for the promotion of sustainable production model in rural areas in Chile: Implementation of pilot projects in firewood drying and greenhouses for agricultural farming (Universidad de Chile)

**Brazil**: Education for Sustainability and Consumption (Alana Institute)

**Cameroon**: Promoting Environmental Best Practices in Cameroon through Music (RCESD)

**Zimbabwe**: Sustainable lifestyles among rural families in Zimbabwe: Small-scale conservation farming to change lifestyles in Africa and beyond (DAPP)

**India**: Strengthening Food Resource and Information Channels for SCP of Food (CSA)

**India/Bangladesh**: SCRIPT (Sustainable Consumption and Recycling Interventions for Paper and Textiles) for Reducing Urban Climate Footprints (SAFE)

**Malaysia**: Upscaling Sound Food Waste Management Practices through Youth and Community Education in Schools and Institute of Higher Learning – Malaysia (FORUM AIR MALAYSIA)

4 additional projects under consideration

- TF
- TF+
S-16 Project

• Focusing on “Policy Design and Evaluation to Ensure Sustainable Consumption and Production Patterns in Asian Region”

• Starting from June 2016 for 3-5 years.

• 4 themes related to SCP in the context of Asia.

• Led by University of Tokyo (Theme 1), NIES (Theme 2), IGES (Theme 3), and Keio University (Theme 4) (with 11 sub-themes)
  • Theme 1 approach: Engineering. Strengthening Relations between Consumption and Production towards Sustainability
  • Theme 2 approach: Sociology. Focusing on lifestyle and stakeholders engagement.
  • Theme 3 approach: Policy and Economics. Focusing on policy evaluation, modeling and sufficiency approach
  • Theme 4 approach: Governance and SDGs. Focusing on SDGs implementation in the context of SCP
S-16 Project

Theme 1: Intensification of C&P relation (Univ. of Tokyo)
Region-oriented design and production/Consumer information and behavior/ Resource circulation

Theme 2: Transition of Asian C&P Patterns based on diverse stakeholders (NIES)
Lifestyle/Management/Communication

Theme 3: Policy Shit towards Sufficiency Approach (IGES)
Impacts on C&P by policy for sufficiency

Theme 4: Governance of SCP from the viewpoint of SDGs (Keio University)
Agreement/Global to Local

Task force for Integration

1. Mid-to-Long term SCP vision from the viewpoint of SDGs in Asia
2. Product design/production systems for improvement of energy and resource efficiency
3. Classification of lifestyles and their leap frog for sufficiency
4. Appropriate and possible international division for Asian region
5. Analysis and evaluation of policy package for Asia

- Inter-governmental policy dialogues
- Strengthen international research network on SCP
- Contribution to UNEP-10YFP
- Proposal of SCP oriented business model to industry

(Improvement of energy and resource efficiency by policy shift)
(Classification of lifestyle)
(Evaluation of Leap frog for sufficiency)
(Resource input per service)
(Patterns for international division)
Acknowledgement

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