Nordic Energy Solutions for Society at Large
Challenges for Multiple Stakeholders, Practical Tools for Decision-Making

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Session 4: Nordic Energy Solutions for society at large
Rapid development might result in social and economic costs both in urban and rural areas. In this session we discuss about Nordic solutions for climate friendly energy solutions and reflect these to practices and realities in Ethiopia.
Framework and Typology for Multistakeholder Partnerships

**Joint Project**
- Short-term, one time collaborative effort among a small set of partners, often to develop or pilot an innovative product or approach

**Joint Program**
- Collaboration among small set of partners to implement a program to address a specific aspect of social problem

**Strategic Alliance**
- Platform for ongoing collaboration around one or more related social issues, aligning partners (typically > 5) in support of a common agenda and joint investments

**Collective Impact**
- Initiative based on long-term commitments to a common agenda by the group of cross-sector actors needed to realize system-wide change around a social problem

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The Ethiopian Perspective
Example of building a Strategic Alliance

Theoretical framework: Platform for **ongoing collaboration** around one or more related social or environmental issues, aligning partners (typically > 5) in support of a **common agenda** and **joint investments**

- The International Eco-industrial Park (EIP) Framework is a tool for increasing competitiveness sustainably (social, environmental, economic and park management in continuous improvement)
- Identify and address market demands for climate-friendly industrial locations and climate-sensitive supply chains
- Provides a common framework for systematically working towards practical & policy solutions and investments to address sustainability challenges, including green energy
- Spanning different regulatory & policy boundaries, the international framework stimulates cross-sectoral practical social problem solving, and involving multiple stakeholders
- Current World Bank Group project to build Ethiopian EIP framework

Identifying regulatory needs, social costs and building bridges through a common framework

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EIP Investment Opportunities

- Resource Efficiency
- Industrial Symbiosis
- Cleaner Water Production
- Clean Infrastructure
- Capacity Building
- £
- $
Cost of risk to society

Tackling new problems and creating collective impacts and societal costs

- New regulatory requirement (Seveso II Directive) created needs for a new mechanism in order to create collective impact
- Harnessed existing land use planning process
  - multi-stakeholder consultation processes focusing on societal cost of risk
  - landowners, industry, authorities, NGOs, pr persons...
- Industry harnessed to joint work through existing HSE committee in Kilpilahti
Building partnerships with joint project

Next step a joint project

• Separate project idea

• Kilpilahti is already the largest oil refinery and petrochemical cluster in the Nordic countries with **significant biofuel production**.

• Goal to create new business from bioeconomy and circular economy in the Kilpilahti industrial area, using tools such as Material Flow Cost Accounting across the companies.

[Link](https://example.com) to the news article published on Gaia website on 22.3.2016.
Active Search for Joint Opportunities

Evolving into a strategic alliance in support of a common agenda

• The joint committee were by now proactively tackling larger challenges that may require **joint investment**

• The natural next step was to pro-actively join forces to identify **new opportunities** in the Industrial Park
  - What type of infrastructure investment would increase our competitiveness and solve practical problems

• A vital component of the long scale learning and development process is the **building of social capital**, trust and vehicles to ensure continuous common dialogue towards meaningful goals
Sustainable investment planning

Strategic alliance in support of a common agenda and joint investments based on social, environmental and financial costs

Figure 3. An illustration of the biogas plants inputs and investments, and the jobs created
Where We Are Today

Neste, Borealis and Helsinki energy utilities to probe residual heat recovery

In Finland, Neste Oyj and Borealis Polymers Oy, in co-operation with the energy companies Fortum Power and Heat Oy, Helen Oy, Vantaan Energia Oy and Porvoo Energia Oy – Borgå Energi Ab, will conduct a preliminary study on recovering and utilizing excess heat generated at the Neste and Borealis industrial manufacturing facilities in Kilpilahti for district heat.

Excess heat from Kilpilahti plants could cover 25% of Helsinki's district heating

In Finland, the production plants of Neste and Borealis Polymers located in Kilpilahti, Porvoo, produce a significant amount of low-temperature excess heat, but no solution exists to utilize this energy. On the basis of a recently completed preliminary study by Neste, Borealis and energy companies in the Helsinki Metropolitan area, the use of excess heat in the production of district heating is technically feasible.
For best results, you need to work at all levels

Figure A2-4: Kilpilahti business environment opportunities

Address a defined problem

Address a systemic challenge

Safety in the park  Safety in society  Energy efficiency  Search for joint opportunities  Sustainable investment planning  Climate friendly solution for society
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