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

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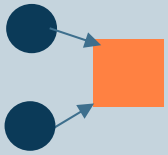
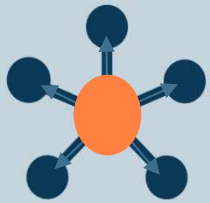
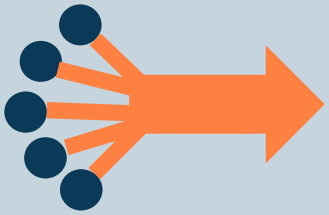
Goal

Address a defined problem → Address a systemic challenge

Model	Joint Project	Joint Program	Strategic Alliance	Collective Impact
				
Definition	Short-term, one time collaborative effort among a small set of partners, often to develop or pilot an innovative product or approach	Collaboration among small set of partners to implement a program to address a specific aspect of social problem	Platform for ongoing collaboration around one or more related social issues, aligning partners (typically > 5) in support of a common agenda and joint investments	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

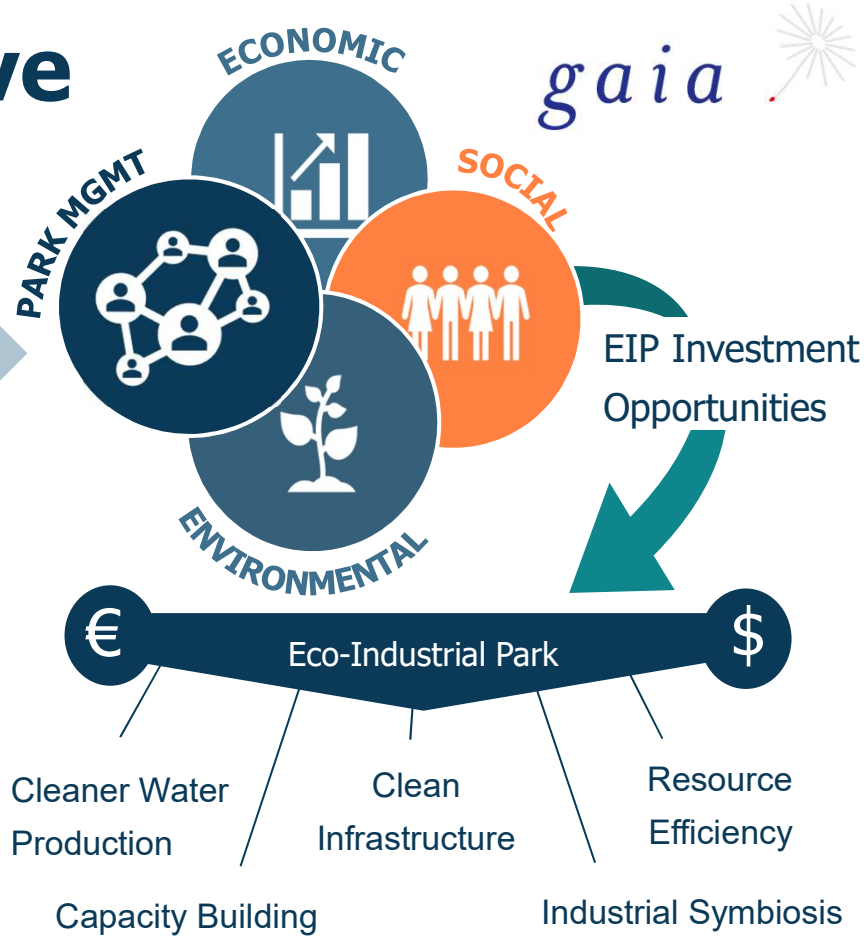
Source: Peterson, K., Mahmud, A., Bhavaraju, N. and Mihaly, A. (2014). The Promise of Partnerships: A Dialogue between INGOs and Donors. FSG.

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

SDGs

Investment mechanism

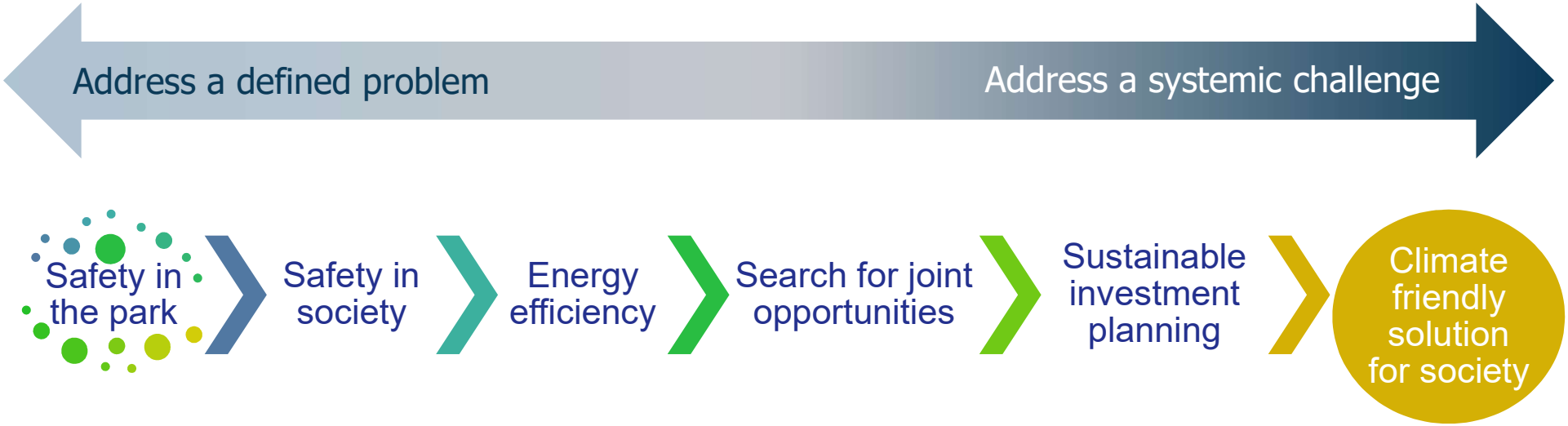
Environmental and energy policy

Industrial park policy

Competitiveness

Risks and preparedness

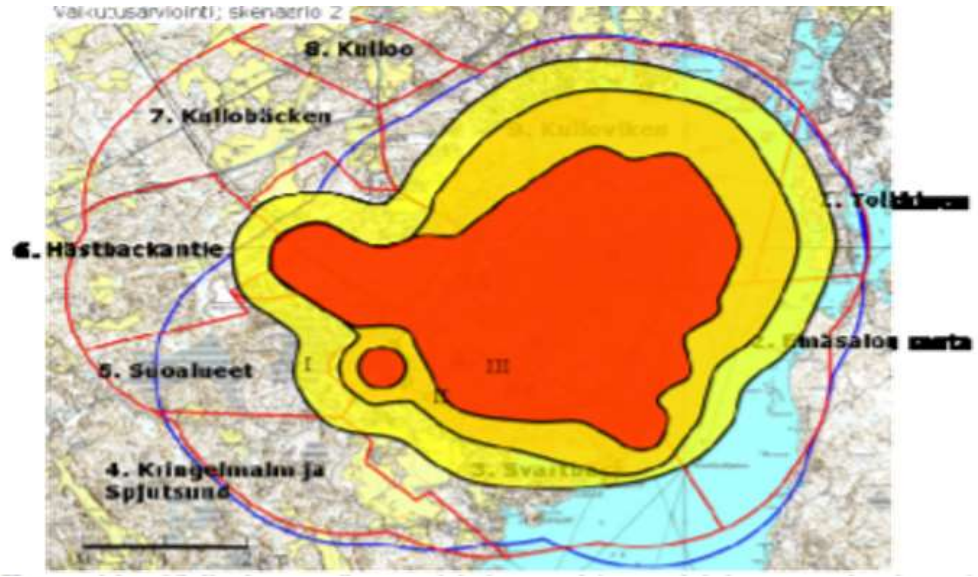
Case Kilpilahti



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

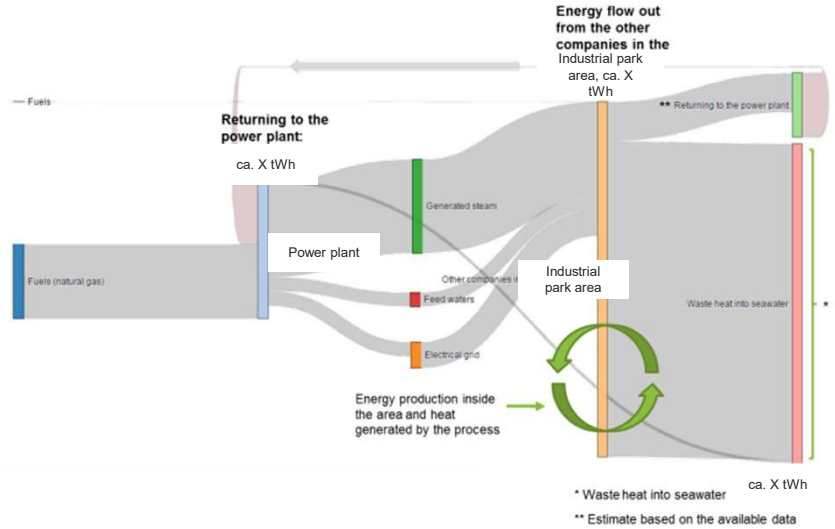


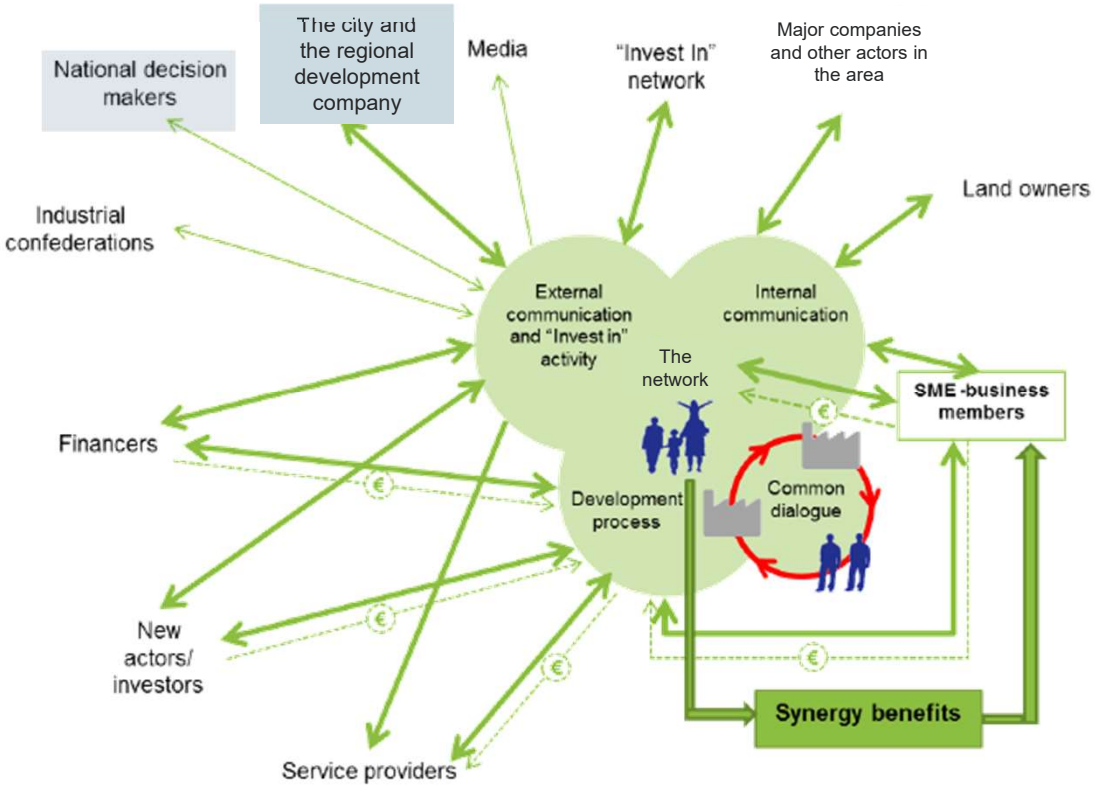
Figure 4. An illustration of the Industrial park area common energy balance

Link 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 pro-actively 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

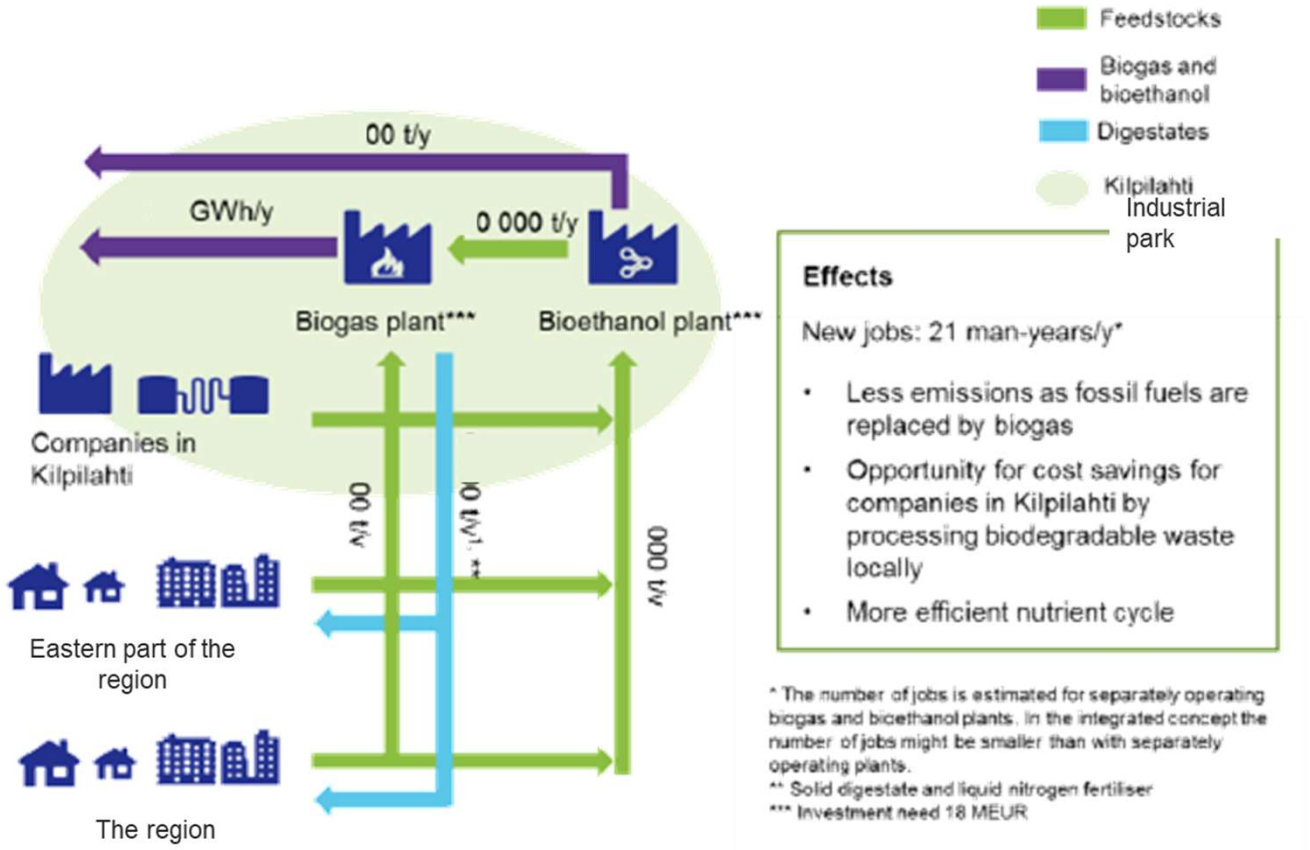


Figure 3. An illustration of the biogas plants inputs and investments, and the jobs created

Where We Are Today

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

Bioenergy International · Heat & Power · June 26, 2018

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 Porvoon 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.

A preliminary study on recovering and utilizing excess heat generated at the Neste and Borealis industrial manufacturing facilities in Kilpilahti, Finland has been commissioned (photo courtesy Neste).

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

Bioenergy International · Heat & Power · June 19, 2019

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.

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For best results, you need to work at all levels

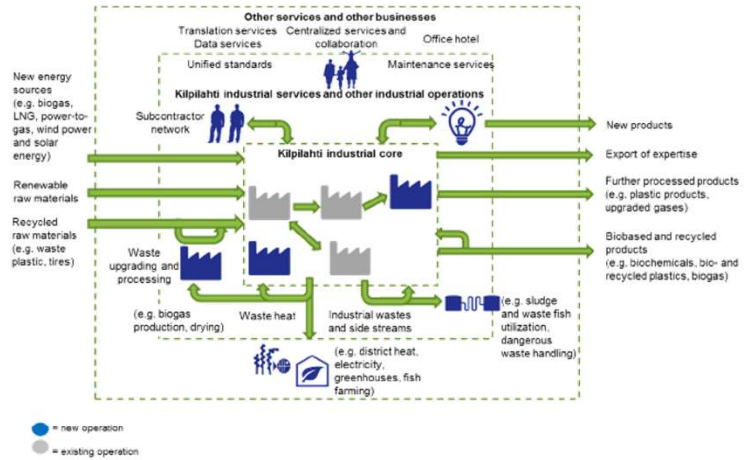

Figure A2-4. Kilpilahti business environment opportunities

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

Our Clients Make the World Cleaner and Safer.

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