



Industrial Symbiosis Practitioner Training

Policies for industrial symbiosis

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EUROPEAN
REGIONAL
DEVELOPMENT
FUND





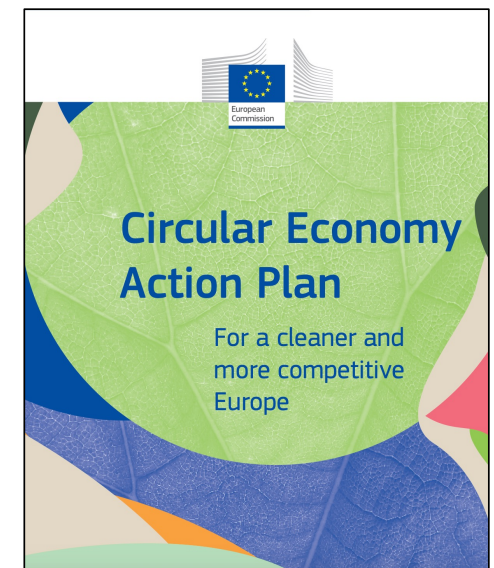
Use the chat during my presentation

- Write **one short post each** in the chat, presenting a type of **regulation/policy/law** that you have experienced as a **barrier or driving force** for industrial symbiosis development.



EU policy support for IS

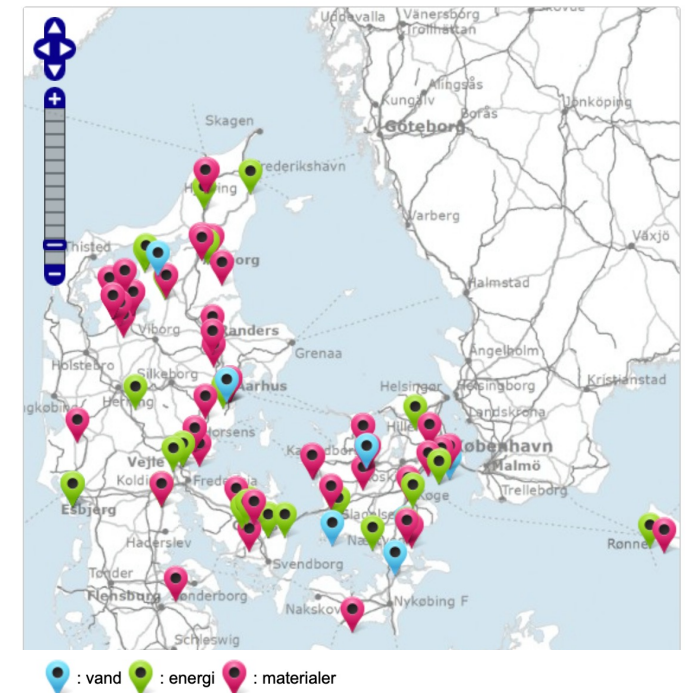
- Revised Circular economy action plan (March 2020)
 - In broad sense support for waste reduction and utilization and indirectly also industrial symbiosis
 - Facilitating industrial symbiosis by developing an industry-led reporting and certification system, and enabling the implementation of industrial symbiosis (2022)



Example: Danish policies

Direct policies support and facilitating IS

- **National programme: "Grønne industri symbioser"** programme 2013-15
 - Task force established in partnership between the Green Transition Fund (omstillingsfonden) and the 5 regions
 - Resource assessment of 500 Danish companies completed (focussing on water, energy and materials)
 - Technical and financial support offered to companies
- **Local support** from municipalities and regions
 - Funding projects through business funds (erhvervsfremme midler) and
 - EU regional funds (e.g the Rest-til-Ressource project)





Policy tools 1: Strategy

- Industrial symbiosis
- Circular economy
- Bioeconomy
- Waste management
- Resource efficiency
- Green growth



Policy tools 2: Regulation

Examples

- Land planning/zoning with emphasis on IS
- Environmental permitting and emission limits supporting IS
- Waste regulation (characterization of waste, waste management rules and regulations, waste treatment regulations)
- Streamlining and clarification of end-of-waste criteria and definitions
- Food safety regulations (particularly important for bio-resources)



Policy tools 3: Economic instruments

Examples

- Taxes and tariffs e.g. landfill fees
- Subsidies (implementation or removal)
- Funding for projects and investments (e.g. IS earmarked)
- Removing technical market barriers
- Public investments in infrastructure that enables sharing of energy/water/materials
- Public procurement

Policy tools 4: Relational building

Examples

- Establish clusters organisations
- Involve network or branch organisations
- Establish public-private partnerships
- Value chain collaboration: e.g. code-of-conduct, supplier



Picture: Peer-to-peer meeting in Kalundborg Symbiosis Center



Policy tools 5: Capacity building

Examples

- Build and share **knowledge** among stakeholders: e.g. on waste production, energy use, local business environment
- Exchange of **best practice cases** (nationally and internationally)
- Build **technical capacities**
- Create **awareness** through campaigns, talks, workshops etc.
- Support **research and development** projects



Thank you!

Want to know more?

knowledge from the Baltic Industrial Symbiosis project:

Report: Policies supporting industrial symbiosis in the Baltic Sea region

- https://symbiosecenter.dk/wp-content/uploads/2020/06/BIS-PlanMiljø-Final-report-on-policies-impacting-industrial-symbiosis_d02.pdf

Report: Guide for Industrial Symbiosis facilitators

- http://www.symbiosis.dk/wp-content/uploads/2021/03/Guide-for-IS-facilitators_online2.pdf

Scientific article: Enhancing policies for deployment of Industrial symbiosis: What are the obstacles, drivers and future way forward?

- <https://www.sciencedirect.com/science/article/pii/S0959652620343961?via%3Dihub>

