

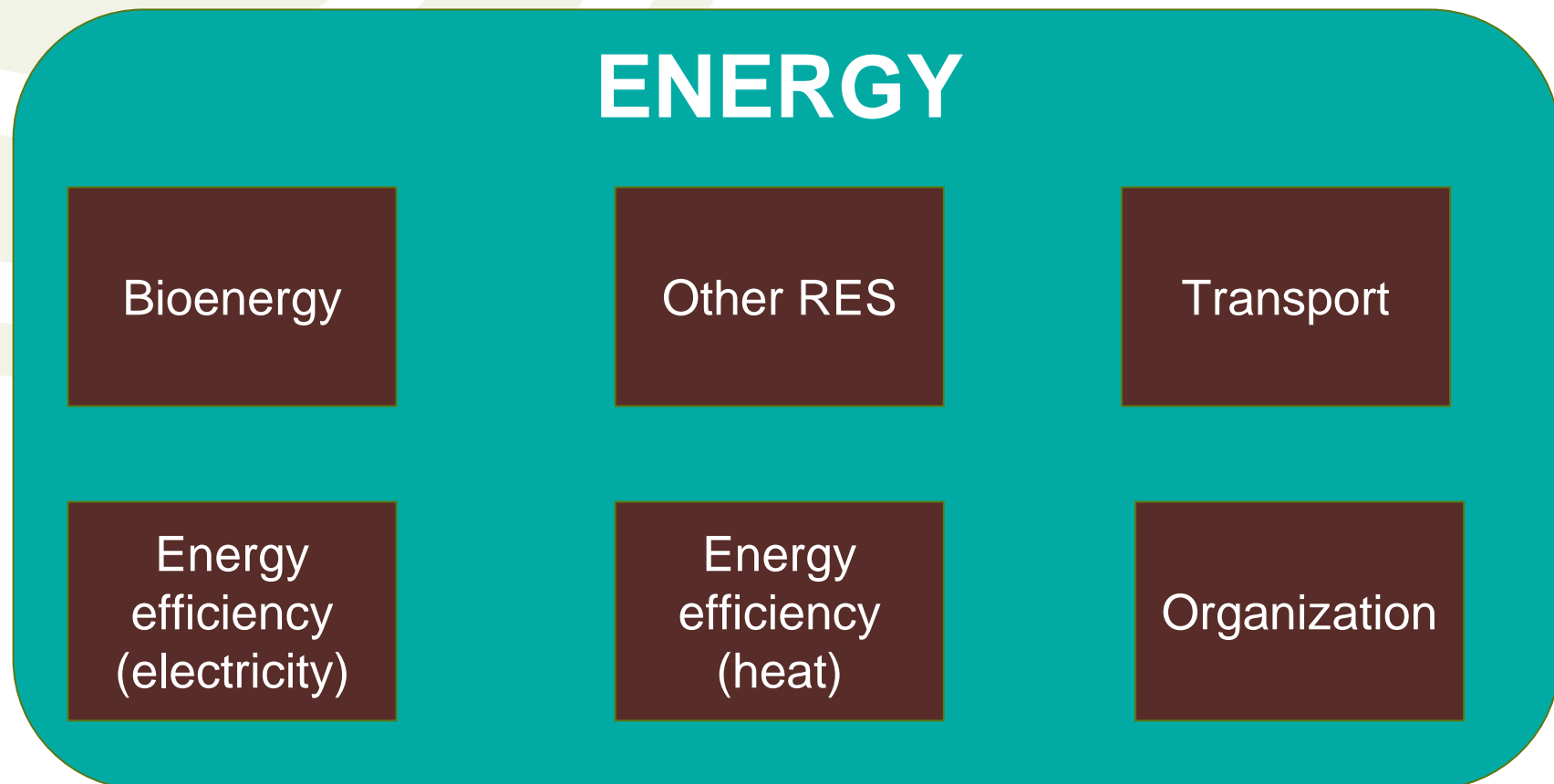
Energy Sector

**Maritime Institute in Gdansk
EcoRegion Conference
1-3 June 2010 Region Zealand**

Presentation:

- **Good practice collection approach**
- **Gaps and plans**
- **Good practice examples**

Conceptual approach to good practice collection in Energy Sector



BIOENERGY

Wood processing

DH run on biomass

Landfill gas

Biogas production

Biogas upgrading

Biofuels I generation

Biofuels II generation

WEST

Large scale pellet prod. Jönköping –(SE)

Biomass fired district: heat for cooling – (SE)

Biogas production model – (SE)

Biogas Upgrading facility – organic absorption (DE)

Biodiesel from straw – (DK)

EAST

DH plant, Kępcice, (PL)

Collection & utilization of landfill gas (PL)

Pilot agricultural biogas plant (LV)

Biodiesel from rape – (PL)

OTHER RES

Wind energy

Geothermal energy

Heat pumps

Photovoltaics

Water energy - including wave

Waste incineration

Waste digestion

WEST

Offshore wind farm, Nysted, (DK)

Geothermal plant Copenhagen (DK)

Teleborg school, Teleborg (SE)

Innovative system for power plant (DK)

Incineration plant (FI)

Co-digestion of waste & energy crops-(SE)

EAST

Onshore wind farm, Kobylnica (PL)

DH geothermal energy (PL)

Hotel with heat pump system (PL)

TRANSPORT

Electric cars

WEST
E-mobility (Electric Vehicles) (DE)

EAST

Gas fleets

Biogas bus fleet, Goetheborg, (SE)

CNG transport (PL)

Bioethanol/biodiesel fleets

Bioethanol fleet Stockholm (SE)

Bioethanol bus fleet, Słupsk (PL)

Fuel cells

Fuel Cell powered fleet – (DE)

Hydrogen

Hydrogen fuel (DE)

ENERGY EFFICIENCY - HEAT

WEST

EAST

Apartment buildings
(including hotels)

Passive wooden
buildings (SE)

Renovation of apartment
building (EE)(LV)

Houses (passive houses)

Single family house,
Banino, (PL)

Schools and churches

Solar systems

Solar panels on
residential buildings (PL)

Recuperation

ENERGY EFFICIENCY - ELECTRICITY

WEST

EAST

Measuring systems

Metering energy consumption

Intelligent grids

Lighting

City lighting (LV)

PV

Teleborg school (SE)

ENERGY EFFICIENCY – HEAT AND ELECTRICITY

Cogeneration

Biomass fired district:
heat for cooling – (SE)

ORGANIZATIONAL

WEST

EAST

Education

Educational and Competence Centre for Bioenergy (NO)

Funding schemes

Biogas Village managed by local cooperative (DE)

Network

Centre for environmental technology (SE)

Industry

Commercial use of bioproducts (DK)

Energy planning

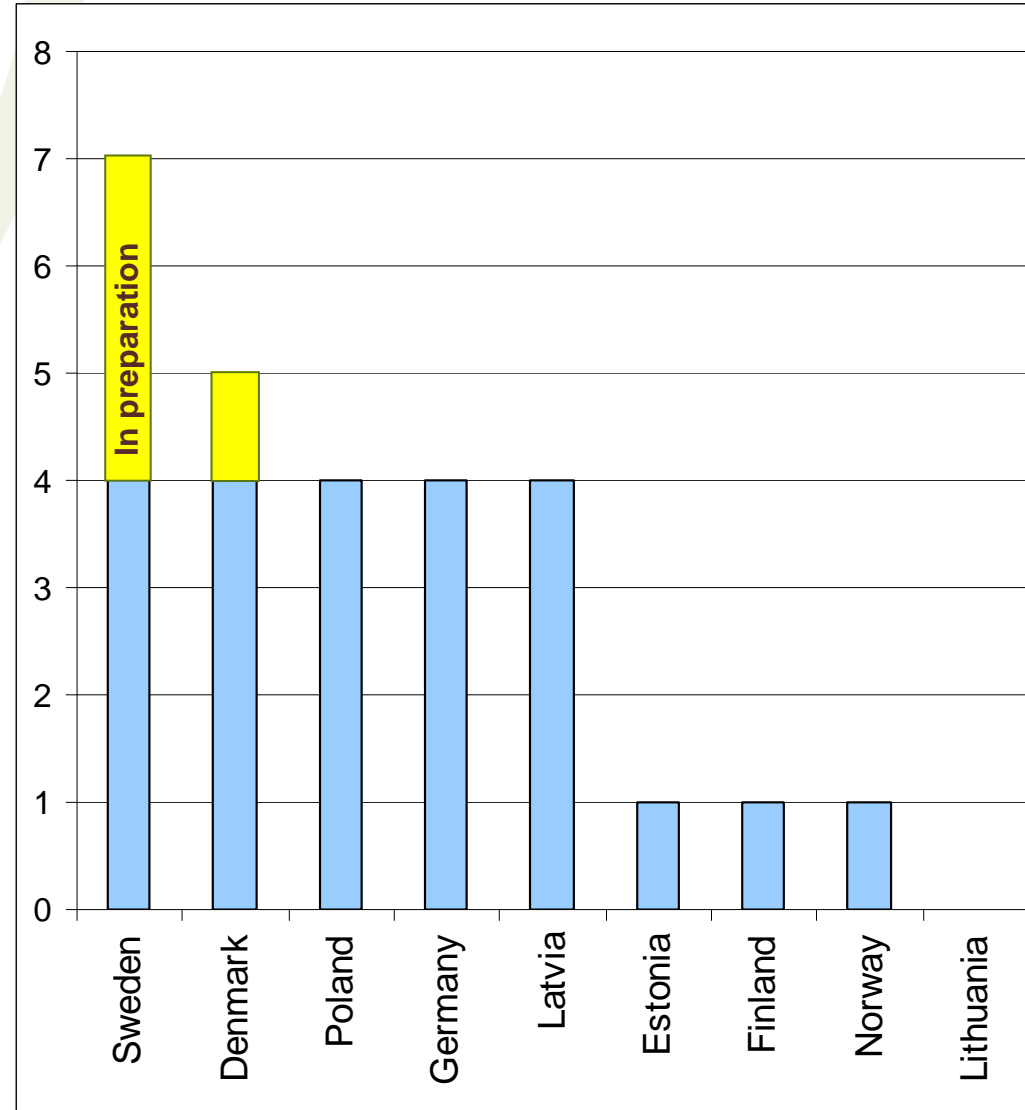
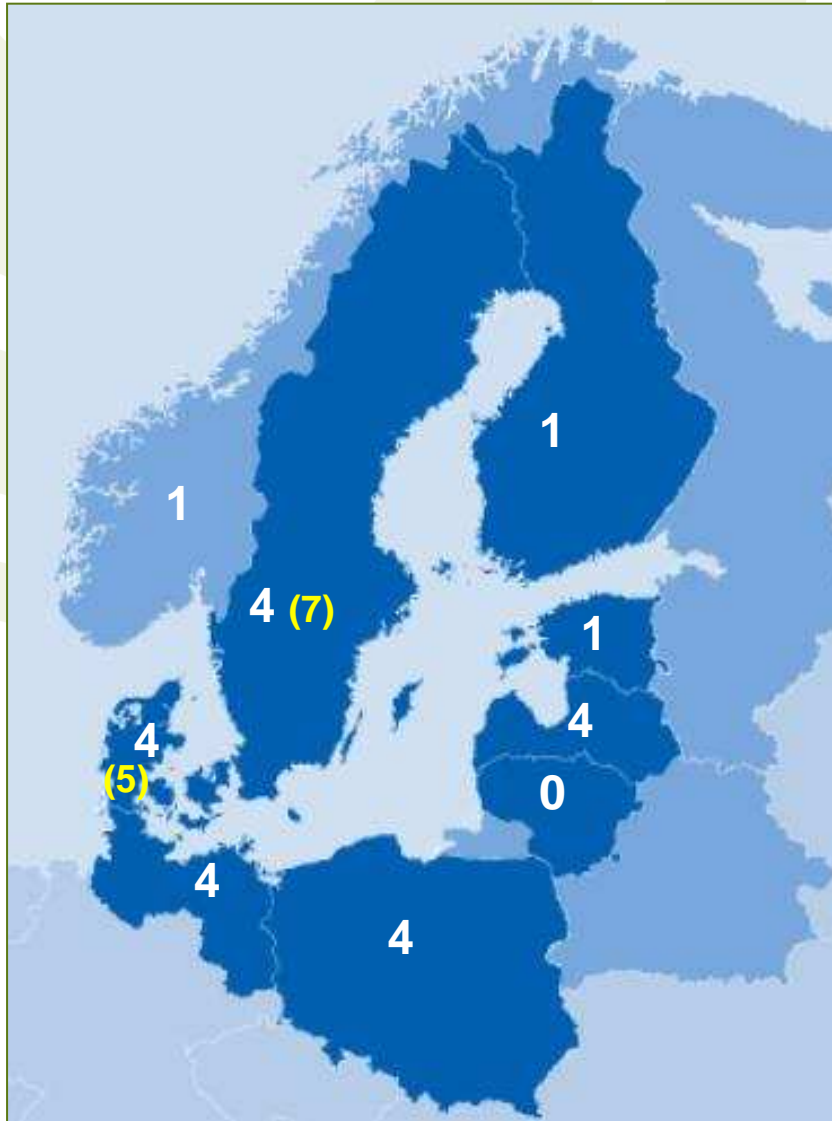
Urban areas (DK)(SE)(EE)(IR)

Rural areas (LV)

Other

Planning of impact on birds (PL)

Developing the BalticSeaRegion into the world's first EcoRegion



Gaps:

- **Uneven geographical coverage of practices – lack of practices from Lithuania, Finland and Estonia**
- **More examples needed from Eastern Europe**

Plans:

- **Focus on evening the geographical coverage**
- **Collection of practices according to the plan**
- **Strengthening cooperation with regions**

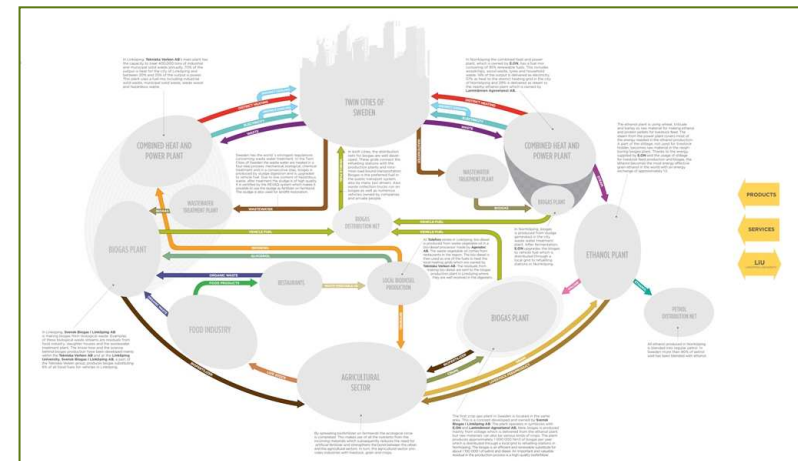
Bioenergy from waste: Biogas production model

Linköping, Sweden

Issue

Biogas provides great opportunities for the local development not only by promoting RES and energy security but also by stimulating many elements of the local economy like waste management, water treatment etc. In the view of biogas production waste is not a burden but an asset which can bring profits to the municipality.

If well managed biogas production system can provide new RES and reduce dependence on fossil fuels.



Good Practice applied:

- **Two biogas plants – 9M Nm³/year**
- **Municipality owned company**
- **Use of food waste and slaughterhouse waste**
- **Creating demand for biogas through public transport**
- **Combining waste management, water treatment, public transportation and agriculture,**
- **Selling of fertilizers**
- **Cooperation with University**
- **Investment costs coverage**

Efficiency: Renovation of an apartment building

Valmiera, Latvia

Issue

Household sector in Latvia is characterized by the highest consumption of energy among all sectors, which is partly due to a big number of badly insulated block buildings. Renovation of such buildings can bring over 50% of energy savings just by applying energy efficient measures, however the problem lies in financing of such projects.



Good Practice applied:

- **Renovation of a 9 storey, large panel building. Not only EE measures but also comfort increasing**
- **47% decrease in the final heat consumption**
- **Financing guaranteed by the ESCO**
- **No additional financing from residents**
- **Payback in 20 years from generated energy savings**
- **!comfort increased without additional costs from residents side!**
- **Involvement of the municipality in the promotion of the solution**