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Network of Climate Change Technology Transfer Centres
in Europe and Latin America

Experiences on climate change adaptation: Estonia

Arvo Iital
Enn Loigu

Tallinn University of Technology

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Area: 45.2 th. km²
Population: 1.3 million
© 2011 Tele Atlas
US Dept of State Geographer
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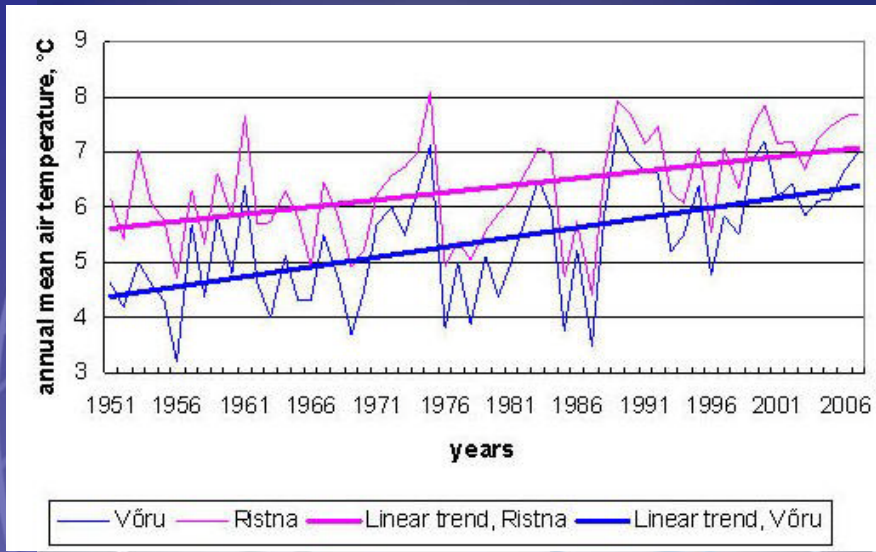
1258 km
53°07'07.45" N 14°27'08.42" E elev 97 m
Eye alt 3208.09 km
Google

Background:

- Possible impacts from climate change in Estonia have not been assessed properly.

- Prevailing opinion (by the public) - the impact of climate change in Estonia is not significant



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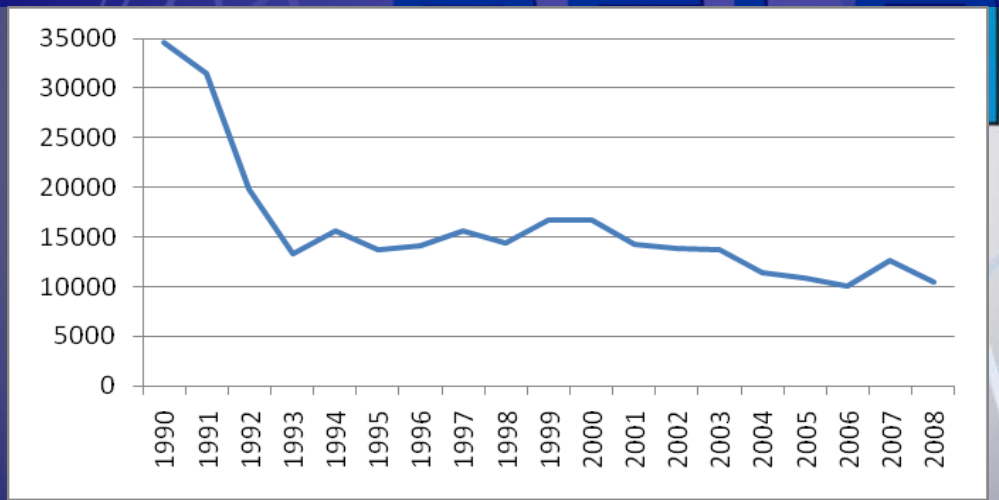
- More positive changes expected i.e. for agriculture, recreation.
- National adaptation strategy is under development (as in many other EU countries)
- The MoE is the coordinating body
- ….after having collecting relevant information on impacts and setting the priority areas.
- Overall goal: all level strategies/plans should include CC aspect

- Most efforts for mitigation – to decrease GHG emission levels
- Kyoto Protocol: during 2008–2012 Estonia had to reduce the GHG emissions by 8% in comparison with the 1990 level - has already been achieved



- The most significant problem (now) - sea level arise - more frequent flooding in the coastal zones

Sectors affected by climate change:

- **Water management** – water availability (drinking water, rivers), changes in discharge, snow cover, water quality, excess rainwater in combined sewer systems, droughts
- **Infrastructure in coastal areas** - flooding
- **Energy supply and consumption** - hydroenergetics: discharge can increase or decrease (seasonality), cooling water
- **Agriculture** - one of the most vulnerable sectors to climate change: prolonged vegetation period, productivity of different crops, pests, need for chemicals
- **Forestry** – changes in dominant tree species, increased productivity, new pest species, forest fires, storms

Adaptation:

- Economic development (to prevent losses)
- Technological innovations (i.e. in energy sector)
- Demographic development (infrastructure in risky areas)
- Governance (development of information systems, risk plans, etc.)

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Policy measures for adaptation:

- legislation and planning
- use of economic instruments
- education, information provision

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- Adaptation on family, community or corporate level does not require often any national strategies:
  - **Companies** had to adopt by:
    - saving energy
    - increasing energy efficiency
  - **Farmers –** decisions about the need for irrigation, switch from one crop to another.
  - **Individuals** - measures to prevent heat loss of houses, energy savings at homes – can be supported by the state.
  - **Forestry sector** – selective tree cutting considering changes in the composition of tree species
  - **Tourism sector** – decisions about new infrastructure

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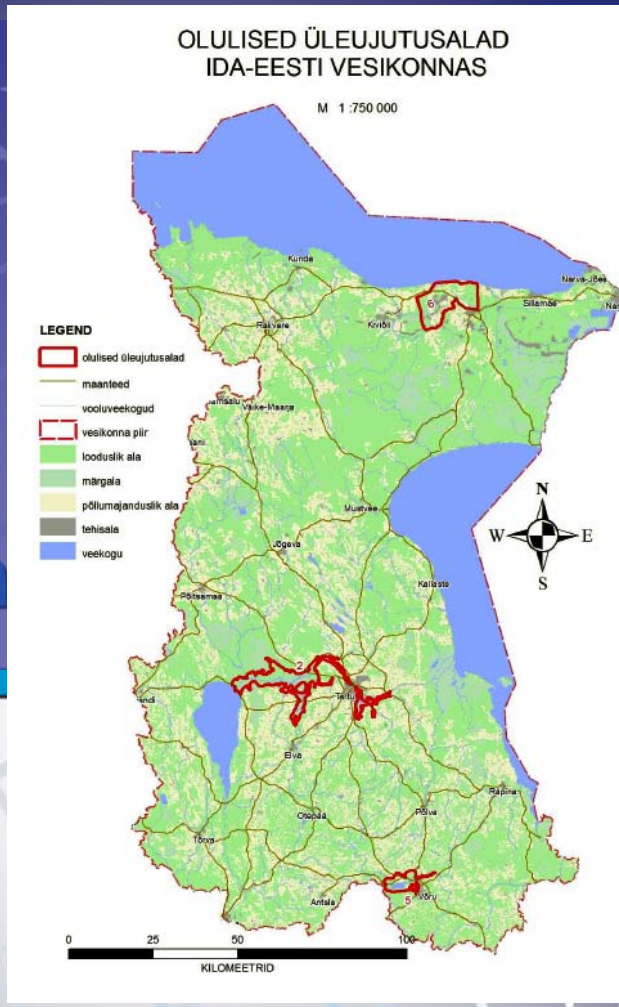
Legislation and planning as a policy measure

- Crisis plans and specific legislation - flood risk (EU legislation adapted in Estonia)
- Preliminary flood risk assessment (MoE) by 22.12.2011



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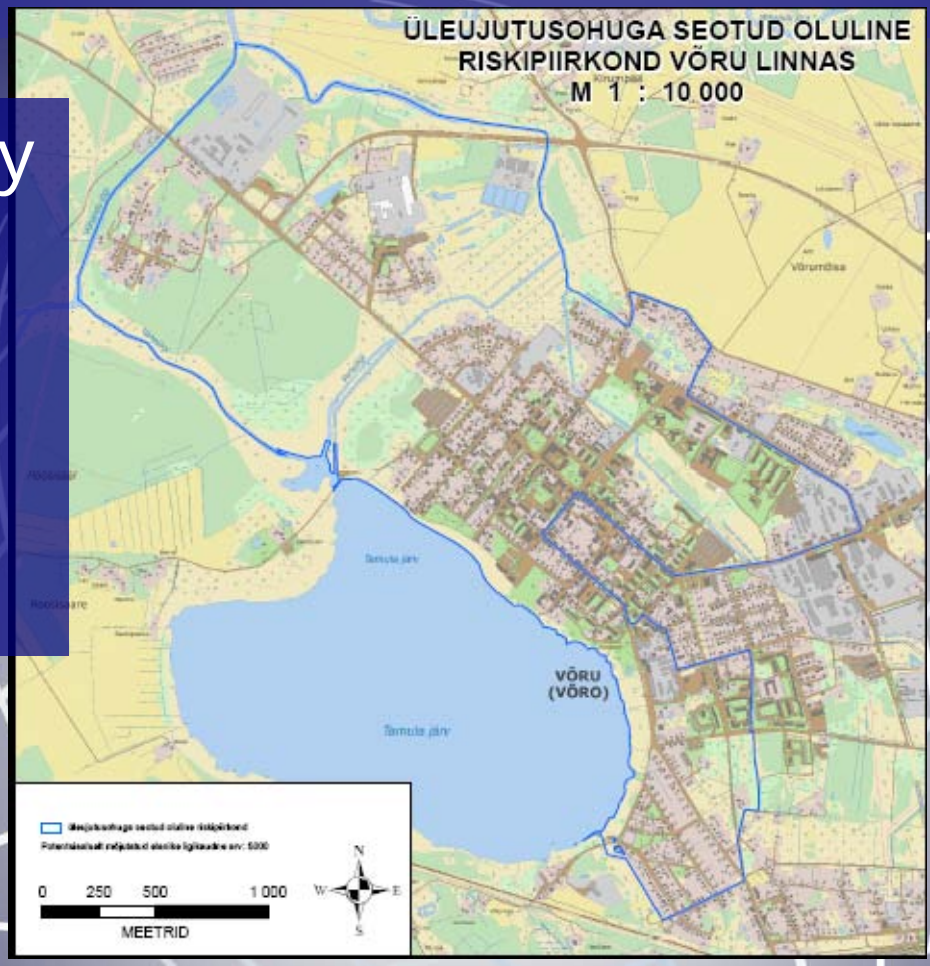
- Mapping of Flood risk areas – by 22.12.2013

- Adaptation plans ready by 22.12.2015

- Guidelines for people living in flood risk areas have been developed



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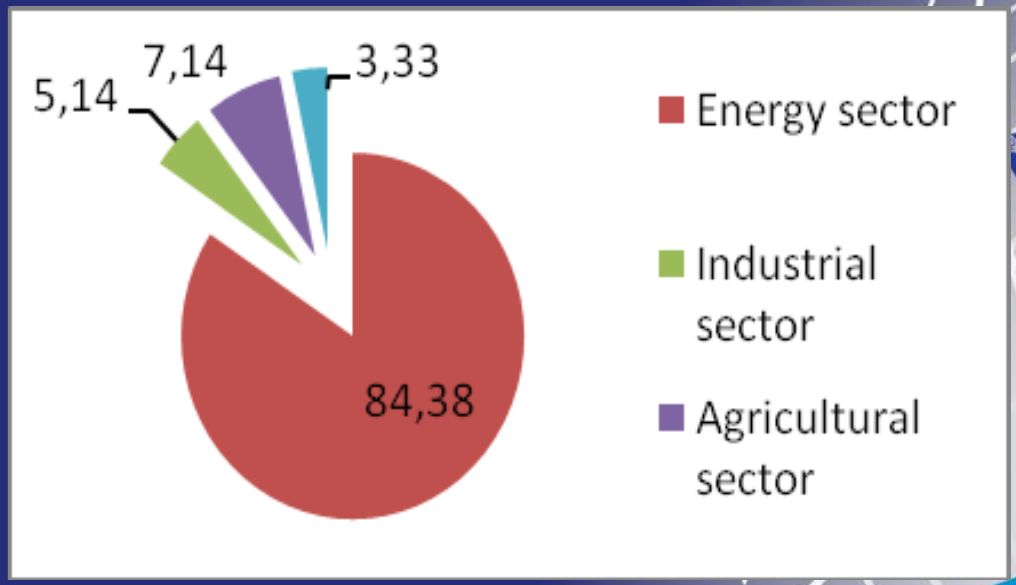
- Energy sector: contributes > 80% of GHG emissions
- legislation and economic instruments are used



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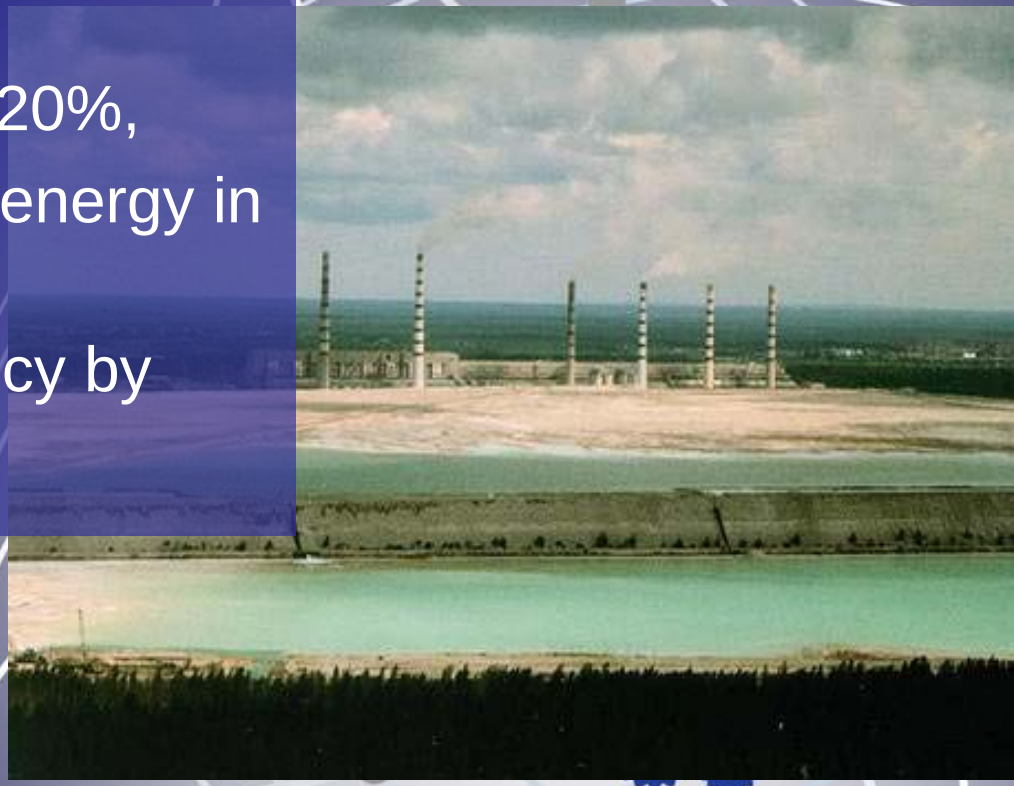
The EU climate and energy package - legally binding targets by 2020:

- to cut GHG emissions by 20%,
- 20% share for renewable energy in final energy consumption,
- to improve energy efficiency by 20%.

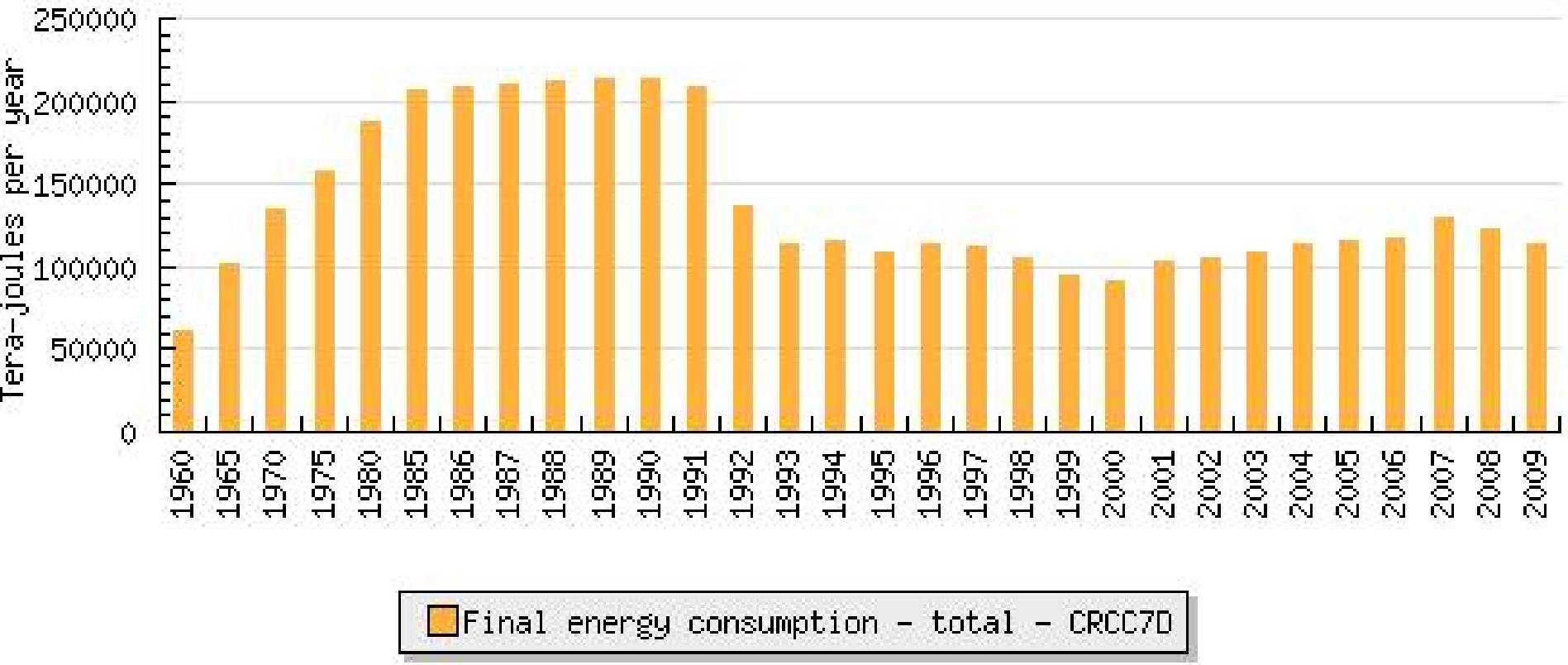


National Renewable Energy Action Plan until 2020 (NREAP, 2010)

Share of renewables in energy end-use	25% by 2025
Saving on energy end-use	9% by 2014

The target is to produce up to 1500 GWh of wind electricity annually.

- Final energy consumption (Source: www.keskkonnainfo.ee)



- *The District Heating Act* - Government has to approve an energy conservation (efficiency) programme and related action plan.

- The regulations providing procedures for the energy performance certificate of buildings (2008)

Economic instruments (energy sector)

- Electricity Market Act (2003) - to enhance generation of electricity from renewable source
- Exemption of tax for biofuels
- Investment support
- Producer has the right to receive support from the distribution network operator for the electricity supplied and sold to the network during first 12 years.
- Wind electricity: the support will be terminated if the total wind based generation reaches 600 GWh/a.

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Economic instruments (agriculture and forestry sector)

- Investment support for bioenergy production

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Technological innovations (measures to promote research and development)

- National energy technology programme (2007-2013)
- National programme to promote use of biomass and bioenergy (2007-2013)

Information, education

- **Websites** - to provide necessary information
- www.kriis.ee contains behaviour instructions for different emergencies and the related legislation documents.

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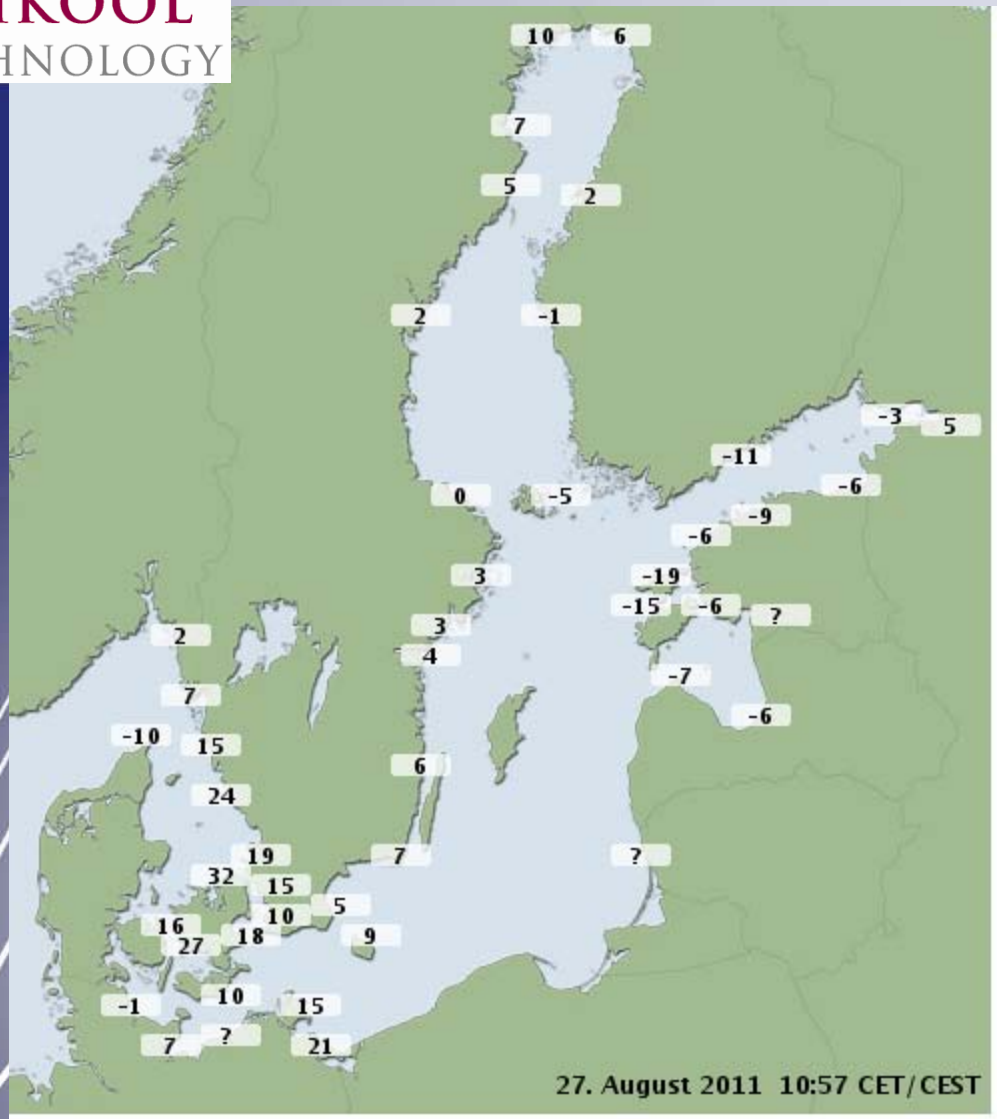
- **Online Sea Level Information System**



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Gracias!!!


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IRELAND
PORTUGAL
ESTONIA! WELCOME
TO THE TITANIC