Recommendations for planning and urban development along lake Mälaren
- Responding to a rising sea level

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Agenda

- Geography
- Facts about lake Mälaren
- Values
- Ongoing projects related to lake Mälaren
- Recommendations for coastal urban planning

Photo: Mattias Klum
Europe
5 counties cooperate regarding lake Mälaren
Lake Mälaren and the region

- Third largest lake in Sweden, 1 096 km²
- The catchment area is 5 % of Sweden’s total area
- One third of total population
- 5 counties and 50 municipalities
- Drinking water supply for more than 2 million people
Region lake Mälaren

- Shifting landscape
  - Cities
  - Agricultural landscape
  - Nature reserves and Natura2000 areas
  - Manufacturing industries

- Expansive region
  - Increasing population
  - Sustainable planning is essential

- More than 20 ports
Values

Drinking water resource

Recreation

Nature reserves
Natura 2000 areas

Geography

Facts

Values

Projects

Recommendations

Culture

heritage

Fairways

Recreation

Drinking

water

resource

Nature

reserves

Natura 2000 areas
The value of lake Mälaren

• Aim: visualize the socioeconomic value of ecosystem service of clean water
  – consider cost and benefits
  – demanding maintained current drinking water quality and ecological status

12.7 billion euro per year
Ongoing projects

- Fairway

- New “lock”
UCAB are overviewing ongoing negotiations regarding the lake’s fairway
A lock in central Stockholm is being replaced
Recommendations for urban development along Mälaren
Why recommendations from the County Administrative Boards?

- Municipalities are responsible for planning
  - Comprehensive plans – spatial planning, how to preserve, use and develop the land
  - Detailed development plans – minor areas, land use, architecture,
  - However...
Planning and Building Act

Regional authorities have to ensure that all plans fulfils some criteria's:

- Water directive
- Air pollutions
- National interests
- Health and safety issues
- Risks – flooding, erosion, land slides
A long term perspective

- High risk for flooding today.
- After 2100 the rising sea level is the main issue for Mälaren.
- Many alternative to solve the problems and keep the values of Mälaren – strategic discussions required on a regional/national level.
Possible actions for Mälaren within 100 years

Dalälven, Vättern...

A new lock
A. Elevate the lock and lake level
B. Lock and pumps
C. Preserve basins

From lake to sea
D. Sea bay
E. Treat salt water to drinking water
F. Another water resource

Build a barrier
G. In Stockholm
H. Öresund
To summarise - Why recommendations

- Planning and Building Act
- Support the municipalities in planning
- Rising sea levels
- Long term perspective
- Water supply for coming generation
Ny sammanhållna bebyggelse samt samhällsfunktioner av betydande vikt behöver placeras ovan nivån 2,7 meter (RH2000)

Enstaka byggnader av lägre värde och mindre känslig infrastruktur bör inte ligga under nivån 1,50 meter (RH2000)

DMW=Dagens medelvatten i Mälaren. Alla höjder i RH2000
Coastal areas that might be affected in the Uppsala region
The EU Floods Directive

The EU Floods directive aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity.
The risk management plan to reduce flood risk

- Requires Member States to assess if all water courses and coast lines are at risk from flooding – 18 identified areas in Sweden
- Map the flood extent and identify assets and humans at risk in these areas
- Develop a risk management plan containing measures to reduce this flood risk

19 april 2013
12

25 November 2014
Collaboration between national, regional and local authorities is a key factor to reduce flood risks

- Swedish civil contingencies agency
- Uppsala county administrative board
- Uppsala municipality

Photo: Mattias Klum
Thank you for your attention!

Province flower of Uppsala *Kungsängslilja* – 'Snakes Head Frittallaria'