



Legal barriers and uncertainties when harvesting reed

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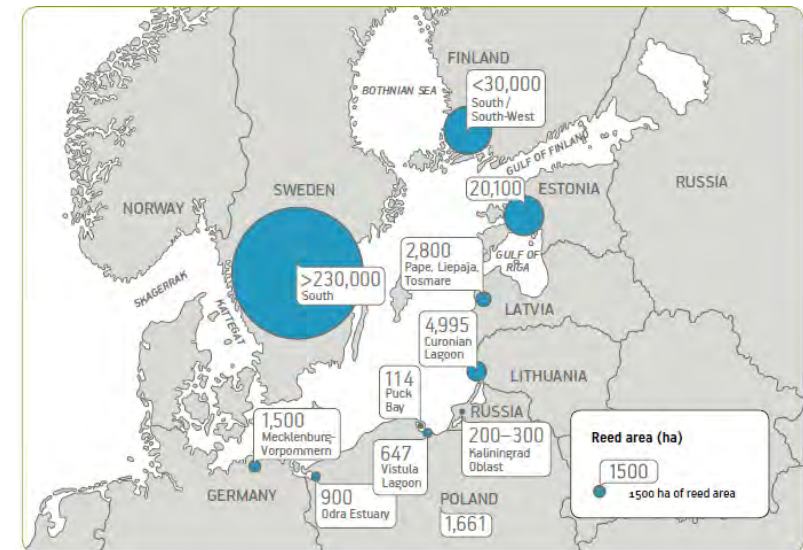
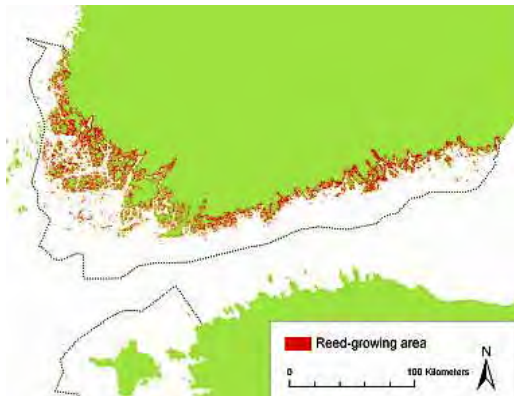
Common reed (*Phragmites australis*)

- Common in wetlands, incl. BSR
- Fastly growing
- Biomass yield: up to 20 t/ha and more
- Forms dense stands – reed beds - can occupy hundreds of hectares
- Up to 4 meters high and can be higher
- Widely used for centuries

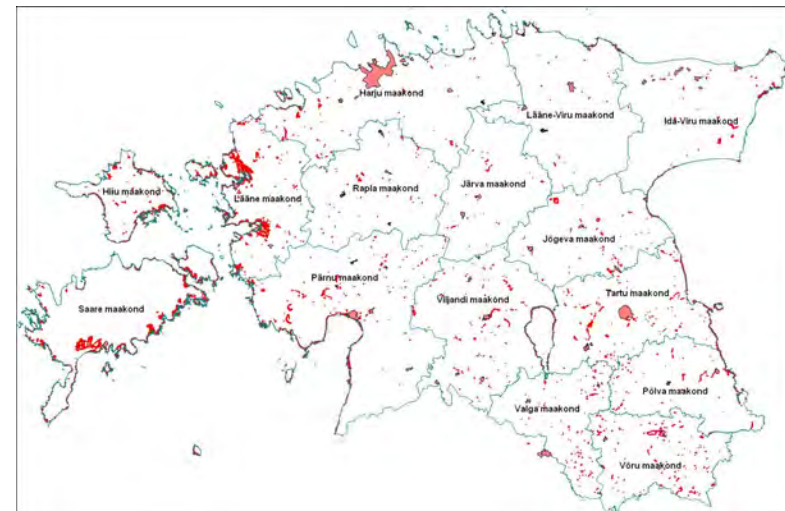
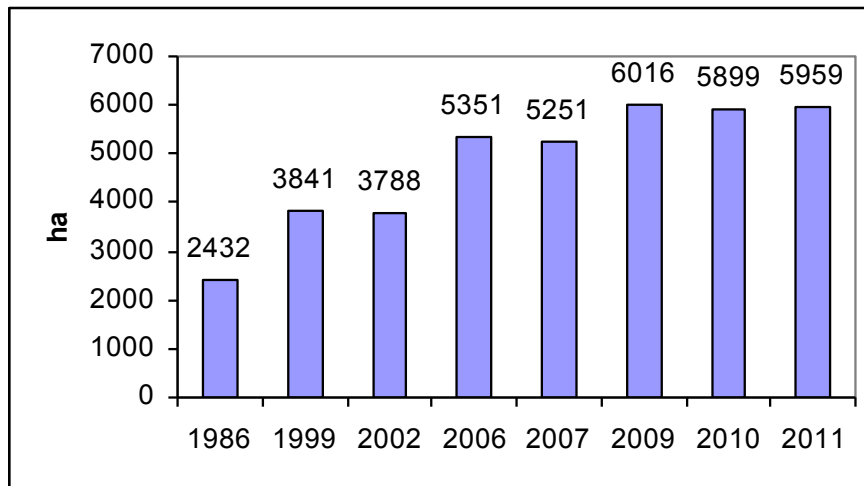


Availability of resource

- Knowledges about actual reed-bed areas and biomass – rather limited
- We know something in some countries in the BSR



- Annual monitoring of reed-bed areas on national level is carried out in Estonia
- Remote Sensing of Estonian Landscapes (Tartu Observatory)



Changes in Estonian coastal reed-bed area in 1986-2011 by estimation of satellite images of Landsat (left, Tartu Observatory) and the major reed-bed areas (right, map by Tambet Kikas, Roostike..., 2008).



Seasonality aspects of use

Understanding the legal conditions

- The size of reed-beds, biomass and moisture content, can vary remarkably that determines possible uses as well as suitable technologies.
- **Construction material** – late winter, early spring harvest (low moisture content, less non-usable parts e.g. leaves)
- **Combustion** – late winter, early spring harvest (low moisture content)
- **Biogas, bioethanol** production –summer, autumn harvest (high moisture content, high biomass)
- **Nutrient removal** – summer, autumn harvest



Environmental risks of reed harvesting

- Mostly as risks to maintain the provision of needed environmental services by the reed and the reed beds.
- **Water protection to remove excess nutrients from coastal waters by removing the reed;**
 - The impact is usually rather local, mostly in areas where the use of reed and other uses can contradict to each other.
 - Bottom of the water body can be damaged when using inappropriate technique or when harvesting in summer or autumn.
- **Maintenance of biodiversity by providing suitable habitats for animal species - bird nesting and fish;**
 - Favourable conditions for reed and reed-beds: areas with slow or stagnant water, shallow, muddy,
 - e.g areas that are often suitable for bird nesting

Therefore, national regulations can restrict harvesting, particularly during spring and summer.



Environmental regulations driving the use of reed:

- either those aiming to protect biodiversity or
- legislation concerning the use of resources in the Baltic Sea.
 - Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (EC, 1992).
 - The Council Directive 2009/147 on the protection of birds (EC, 2009b).
 - Natura 2000 areas that can often include large parts of the coastal sea.
- **None of these directives account the Common Reed as a species that requires protection, although**
- **reed beds can in some coastal areas be accounted as a valuable habitats for birds and the other species that require protection.**



The second group of environmental regulations includes:

- Marine Strategy Framework Directive (2008/56/EC)
 - requires drawing up the necessary measures to achieve “good status” of all marine waters by 2020.
- Recommendation of the European Parliament and of the Council concerning the implementation of Integrated Coastal Zone Management in Europe (2002/413/EC)
 - recommend developing of national strategies based e.g. on the
 - **long-term perspective;**
 - **local specificity, and**
 - **working with natural processes and respecting the carrying capacity of ecosystems.**



Environmental regulations driving the use of reed

- The HELCOM Baltic Sea Action Plan (HELCOM, 2007) foresees considerable nutrient input reductions;
 - Removal of nutrients from the system by reed harvesting can contribute to the overall nutrient balance of the Sea.
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- **Reed is not defined as a resource in any of the BSA countries**
 - **Therefore, requirements for e.g. sustainable use of resources are not applicable.**

Country-specific legal barriers

- harvesting season (depends on the climate conditions)
- untouched reed area

Country	Harvesting Area	Harvesting Season
Denmark	10-20% of reed area or at least 3 ha must be left untouched 10-30 m wide untouched strip of reed must be left in the outer part of the reed bed area	No harvesting after 28 th February
Sweden	50 to 50 m large parcels inside the harvested area should form a mosaic of used/unused reed areas 40 m wide untouched strip of reed must be left in the outer part of the reed bed area	No harvesting after 28 th February
Finland / Estonia	In some areas, at least 20 ha of untouched reed bed must be left as nesting area of bittern in Finland	No harvesting after 15 th March
Latvia	Protection and use regulations depend on the individual area	No harvesting after 31 st March



More legal requirements

- Some additional restrictions are relevant for bird sanctuaries and the Natura areas;
- In some cases harvesting is not allowed at all;
- National regulations can establish the contact pressure per unit area of harvesters and transport vehicles,
- e.g. should not exceed 100 g/m² in Germany (<http://www.hiss-reet.com>).

More legal requirements

- Use of transport vehicles out of the official roads is prohibited.
- Not applicable for specific transport vehicles (agriculture, forestry, etc)
- Harvesting of reed along the coasts and transport?
- Farmers can receive agri-environmental support for mowing coastal meadows that can include removal of reed.
- Aim is just to get rid of reed.
- Burning – historic method, not applicable.



Curative mud and regulations affecting the use of reed

- Favourable conditions for reed – in shallow fresh or marine waters
- The bottom is often muddy.
- In some parts of the BSR this mud is defined as curative.

Used for:

- health care purposes
- ingredient in cosmetic products
- Regulations to prohibit economic activities near curative mud deposits



Photos: OÜ Ravimuda

Development of legal requirements and issues that need to be considered:

- Resident and migratory bird populations, timing of the breeding season;
- Resident fish populations - nursery grounds;
- The type of technology to be used;
- The best timing to mow remains an open issue (winter? other seasons?), especially in the south part of the BSA.



Photo by M. Kose



<http://www.doroteamekaniska.se>



Thank you!

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