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

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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

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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.
  - 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.

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The second group of environmental regulations includes:

  - requires drawing up the necessary measures to achieve “good status” of all marine waters by 2020.
  - 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) foresee considerable nutrient input reductions;
- Removal of nutrients from the system by reed harvesting can contribute to the overall nutrient balance of the Sea.

- 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

<table>
<thead>
<tr>
<th>Country</th>
<th>Harvesting Area</th>
<th>Harvesting Season</th>
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<tbody>
<tr>
<td>Denmark</td>
<td>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</td>
<td>No harvesting after 28th February</td>
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<tr>
<td>Sweden</td>
<td>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</td>
<td>No harvesting after 28th February</td>
</tr>
<tr>
<td>Finland / Estonia</td>
<td>In some areas, at least 20 ha of untouched reed bed must be left as nesting area of bittern in Finland</td>
<td>No harvesting after 15th March</td>
</tr>
<tr>
<td>Latvia</td>
<td>Protection and use regulations depend on the individual area</td>
<td>No harvesting after 31st March</td>
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</tbody>
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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).

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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

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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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