Mires and climate - Sweden

Lille Vildmose, Denmark
September 2014
Jenny Lonnstad
Swedish EPA

Jenny.lonnstad@naturvardsverket.se

Map: Statistiska centralbyrån, 2013. Markanvändningen i Sverige. (Sjätte utgåvan)
VMI – Mire types

Total mire area 5.1 million ha, or 12.7% of total land area

VMI – Human impact

What the degree of human impact is for the sub-site. Sub-site with local impact also include large areas with no impact.

Source: Naturvårdsverket 2014.
VMI sub-site area – Degree of human impact

Note! Tricky data about local impact, only parts of the total area has the impact.

IM=Indeterminable mire, PB=Plane and slightly raised bogs, RB=Raised bogs, NB=Northern plane bogs TF=Topogenous fens, SF=Soligenous fens, MM=Mixed mire.

Source: Naturvårdsverket 2014.
Drainage and emissions

• 1,500,000 hectares of drained peatlands for agriculture and forestry.

• Drained peatlands (agriculture & LULUCF) emits 9 Mton CO₂eq.

• That is about 15 % of the total reported Swedish GHG-emissions.

Source: Naturvårdsverket 2014.
Restoration

• Two ways of selecting restoration sites, both equally important.

• Only considering climate change. Drained abandoned arable land unknown area high priority and also 300 000 ha with failed drainage for forestry.

• Restoring mire sites with high conservation values that are affected by drainage in part of the site.

Source: Naturvårdsverket 2014.
Ramsar sites for carbon sequestration & storage

- Large sites with thick peat layers
- Good prospects for continuing peat growth with future climate
- No sites with only the climate criterion, other high conservation values needed
# Swedish wetlands and area surveyed by VMI

<table>
<thead>
<tr>
<th>Wetland types 2010</th>
<th>Total in Sweden - SCB</th>
<th>Surveyed by VMI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in hectares</td>
<td>Percent of land area</td>
</tr>
<tr>
<td>Wetlands</td>
<td>9,300,000</td>
<td>23</td>
</tr>
<tr>
<td>Mire</td>
<td>5,155,800</td>
<td>13</td>
</tr>
<tr>
<td>Mire - open</td>
<td>3,707,804</td>
<td>9</td>
</tr>
<tr>
<td>Mire – forested</td>
<td>1,448,996</td>
<td>3</td>
</tr>
<tr>
<td>Peat excavations</td>
<td>21,800</td>
<td>0</td>
</tr>
<tr>
<td>Sometimes peat forming wetlands</td>
<td>390,691</td>
<td></td>
</tr>
<tr>
<td>Swamp forest</td>
<td>266,821</td>
<td></td>
</tr>
<tr>
<td>Wet Heath</td>
<td>26,414</td>
<td></td>
</tr>
<tr>
<td>Inundated fens</td>
<td>97,456</td>
<td></td>
</tr>
</tbody>
</table>

Source: Naturvårdsverket 2014 and SCB 2013.