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ESTONIAN MIRES AND MIRE FORESTS

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Peatlands cover 1,010,000 ha or 22.3% of the Estonian territory. In the mid-1990s 1,626 mires with an area over 10 ha and peat layer more than 0.9 m thick was recorded. 143 mires extend over more than 1,000 ha. The average thickness of the peat deposit of mires is 3.2 m, while the maximum depth recorded is up to 18 m.

Mires occur all across the country. Extensive fen areas are primarily found in the western and central parts of the Estonian mainland. Species-rich fens are situated on the calcareous sub-surface on Saaremaa Island and in the western coastal part of the mainland. Poor fens are more common in the eastern part of the country. Floodplain (fluviogeneous) fens are most widely represented in the lowermost part of the western and south-western Estonian river valleys, as well as in the eastern and south-eastern Estonia. Spring fens are distributed rather sparsely over the country, mostly located on the marginal slopes of the Pandivere and Sakala Uplands and on Saaremaa Island. Transitional mire communities are most prominent in western and central Estonia. Larger bogs are located in the western, central and north-eastern parts of the Estonian mainland.

The main threat to Estonian mires has come and will come from drainage activities; at the end of 1980s altogether 1,006,300 ha of peatlands was drained. According to the last mire inventory carried out in 1997-2011, mires in more or less natural state comprise ca 5.5% of the territory, the remaining 17% are actually covered by paludified grasslands, peatland forests, different degraded peatlands etc. Poor fens occur in 4,381 sites, covering 17,770 ha; rich (calcareous) fens in 1,520 sites (17,817 ha), minerotrophic quagmires in 306 sites (2,076 ha), floodplain fens in 219 sites (3,277 ha), spring fens in 265 sites (752 ha); mixotrophic (transitional) grass mires in 1778 sites (34,713 ha), mixotrophic (transitional) quagmires in 406 sites (4,628 ha); heath moors in 88 sites (1,116 ha), ombrotrophic raised bogs in 1,447 sites (144,619 ha). By different site types, the conservation status of 67–95% of inspected mires was assessed to be excellent or high. Minerotrophic *Calla* site type swamp forests occupy in Estonia 16,200 ha and *Alnus-Betula* site type forests 34,300 ha, mixotrophic mire forests 75,300 ha and bog forests 41,300 ha. Area of drained swamp forests is at least 328,300 ha.

Estonia has a large number of mires of international importance: for example, some of the largest and most intact boreo-nemoral raised bogs and rich (calcareous) fens which are valuable in all-European context. By the total surface of all active raised bogs, Estonia holds the third place in Europe after Sweden and Latvia, even in absolute numbers. However, the number and surface of large bogs is much lower in Latvia (comparable to the situation in south-eastern Estonia) and e.g. in southern Finland the pressure of amelioration and other human impacts have been much more intensive than in Estonia. Therefore Estonia (together with Sweden) turns out to be the main responsible country for preserving large bogs within the European Union.