## A short overview over stump assessment (field protocol) in some European NFIs

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The information has been collected through electronic mail mid December 2014 - on occasion of Swiss NFI reflecting the improvement of its currently applied method. Many thanks to all colleagues for the prompt and generous support. (No guarantee for the correctness of the below information.)

- **NO (perm)** removed trees are registred, rot (in classes) is registered on stumps from spruce trees harvested since previous inventory
- **SE (perm)** registering drain, cause, time of death (no specific stump assessment)
- **SE (temp)** stumps from trees felled during the last growing season: diameter, height, species, status of tree (when felled), time of death (for felled dead trees: season), type of stump (windfelled or not), traces of rot (heterobasidion annosum, 5 classes, diameter of rot centre)
- **FI (temp)** no stump measurements due to time consumption, reliability problems, and stumps often hidden (piles of branches) or sometimes removed (bioenergy)
- **FI (perm)** removed trees and presence of stump are registred (no re-identification of stumps in successive inventories)
- DK (temp) stumps included
- **DK (perm)** stumps re-identified and re-measured in successive inventories: diameter, height, decay
- **LT (perm)** stump height and diamater (at root collar), (sub-sample of) stumps re-identified and decay remeasured in subsequent inventories
- **CZ (perm)** identification and measurement of stumps from drain trees (since the previous inventory): cause, stump (semi-)circumference (specifications for bark and root swells) and stump height (terrain slopes considered); identification and measurement of all other stumps (diameter threshold as for trees)

with re-identification and re-measurement in successive inventories: species (broadleaves, conifers), diameter (at cut-height), (decay under planning)

- **SK (perm)** stumps 7-15 cm (over bark, at breaking/cutting height) are counted (with average diameter and height), dominant decay stage and species; sumps above 15 cm are located, measured (height, diameter) and species and decay stage recocorded, and re-measurement and re-identification planned in the second inventory
- **ES (perm)** measurement of height (1.3 m max) and diameter at mid-height (7.5 cm min), origin (cause of drain), decay; (measument) details for coppice stumps available
- **FR (perm)** registering drain (under the new system of re-measured plots)
- IT (temp) height (min and max), diameter (two cross measurements), decay stage (5 classes), tree species of all stumps (threshold: 9.5 cm at cut/broken end); age of stump (more or less than one year) and some basic information (counting) of stumps with diameter between 2.5 cm and 7.5 cm is available (but less important); note (AL): the Italian NFI uses permanent plots, but so far no permanent, i.e. re-identified trees/stumps.
- **DE (perm)** registering drain independent of stump inventory; all stumps on a small plot (5 m radius) with height and diameter (cut surface, threshold 20 cm), decay stage (4 classes), tree species (4 groups)
- **AT (perm)** registering drain independent of stump inventory; all stumps (threshold 100 mm, upper side) on a plot of 300 m<sup>2</sup> with measured mean height and mean diameter, decay stage (4 classes), tree species, human traces (felling), presence of young trees on/near stump
- **CH (perm)** height and diameter of remaining stumps of drain trees (between current and previous inventory), and age of these trees (counting number of annual growth rings)