



**Combined FutMon/ICP Forests Expert Meeting**  
**February 15th-19th 2010, Tampere, Finland**

***ICC 2009***

***June 1.-4.6.2009***

***Gustavelund***

***Finland***

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# ICC 2009 FINLAND

## National Reference Teams and number of participants



Czech republic 2



Latvia 1



Estonia 2



Lithuania 1



Finland 4



Norway 1



Germany 3



Russia 2



Sweden 1

Organizers: Martti Lindgren (Metla), Jarmo Poikolainen (Metla),  
Antti Pouttu (Metla) & Hannu Rantanen (Metla)

## Content of ICC

Field exercises (25 trees/plot)

2\* Birch

3\* Norway spruce and Scots pine

Photo test

Birch, Pine and Spruce (20 trees/species)

Damage assessment (some discussion in the field)

Introduction of D1 (e.g. Crown diameter related distance to neighbourous)

# Methods of defoliation assessment

*According to the FutMon field protocol v 1.0 last update 15th  
May 2009(D1)*

## *Assessable crown*

- *widest span of the crown*
- *1/3 of living crown*
- *national definition*

## *Assessment position*

- *fixed place (marked)*
- *around the tree (national)*

## Results of ICC 2009 in Finland 1/2

- The average defoliation level of the trees increased since 2005 on all the ICC plots except for plot 99\_1508 (Birch) (*ICC was held in early summer in 2009 and late summer in 2005!*).
- Of the tested assessment methods the "Fixed 1/3-method" gave the lowest average defoliation level on all of the ICC plots and the "Around widest-method" gave the highest levels.
- However, the differences between the tested methods were relatively small in many cases and no clear pattern was found between tested methods.
- None of the individual trees were given an equal defoliation score the national teams.

## Results of ICC 2009 in Finland 2/2

- The range of defoliation scores between the assessed trees varied from 5 to 65%. Out of a total of 900 defoliation scores given during the exercise, the range in the defoliation scores was 10% or less in 123 cases (14%).
- The assessment method was not found to have any effect on the range. However, on three of the plots (1501, 1506 and 1508) the proportion of trees with a max. 10% range was the highest when the observers used the Fixed-1/3-method.
- The standard deviation between the countries also clearly increased on all the plots in 2009 compared to the standard deviation in 2005, except for plot 99\_1503 where only a slight increase was found.
- The standard deviation of the tested assessment method varied between the plots in a non systematic way. On some of the plots, e.g. 1501 and 1506, the standard deviations were slightly lower when the fixed method was used but, in general, there were no clear effects of the assessment method on the variation in defoliation.

## General recommendations 1/2

- Compared to the ICC 2009, only 3 of the 9 NRT's consisted of exactly the same persons (Lithuania, Norway Level II, and Sweden) as in the previous ICC 2005 in Finland. In addition, the field groups from the Czech Republic and Estonia had only one participant whom participated in both 2009 and 2005. The other NRT's had no common representatives in NRT's compared to the situation in 2005. Thus, it would have been difficult to carry out a country-wise comparison and this was not done.
- The main objective of the ICC is to check the long-term stability and comparability of assessments. It is therefore extremely important to keep the composition of the NRT's as uniform as possible. In a long-term monitoring program this seems to be a very difficult and challenging task.
- Testing different assessment methods is a good way to obtain information for the further development and improvement of defoliation assessment. However, including six different assessment methods in the ICC at the same time was a very laborious/time-consuming task for the participants as well as for the organizers.

# General recommendations 2/2

- Discussions in the field are an important part of the ICC, and it should therefore be taken into account when planning the daily program and duration of the ICC.
- Definitions of new methods of assessment should be clearly explained to the participants during the introduction process, and the organizers should also be familiar with the new methods before the ICC. In addition, all the participants should also be fully familiar with the manual before they participate in the ICC.
- The timing of the ICC is important. For example, the foliage of broadleaved trees is not fully developed in the very beginning of summer in the Northern part of Europe. It is also very important to ensure that the representatives of NRT's participating in the ICC already have practical experience of the assessment of all Crown Condition parameters before the ICC.
- What is purpose of ICC? Should we include an introduction of new methods and training (**calibration!!!**) to ICC's too. Duration of ICC's?
- **Introduction of new method-> training -> testing!**

## Photo test

- The aim of the photo test should be defined precisely.
- There are some problems in obtaining photos of the same trees assessed in the field, especially if the conditions should be same in both assessments.
- If the aim is to compare the difference between the countries, a good selection of high quality photos would be more suitable than the photos obtained during the course.
- The choice should be much broader and the variation in the defoliation level on the photos, as well as the cause of defoliation, should be substantially wider.





**Thank you for your attention**