

**COST ACTION E43**  
**Harmonisation of National Inventories in Europe:**  
**Techniques for Common Reporting**  
**WG2 Task Force Meeting**  
**27-29 October 2008**  
**Northern Forest Research Station**  
**Roslin, Scotland**

**Monday, 27 October 2008**

Mark LAWRENCE introduces the heads of forest inventory of Scotland/UK within the North Forest Research Center in Roslin. Erkki TOMPPPO, EMIL CIENCIALA open WG2 tasks and issues to be addressed.

The agenda is reviewed. Erkki TOMPPPO proposed to review all abstracts, to formulate a working plan, and organize a schedule for all articles.

WG2 participated in the simultaneous COST Action E43 Editorial board meeting in the morning of the 27th. The status and the work left in the reference definitions, bridging functions and publications were discussed. The work plan for the remainder of the meeting with the other working groups was made

Special Issue Articles

Emil CIENCIALA introduced WG2 issues, such as climate and carbon reporting estimates and introduced the current WG2 papers. Working with 4 scientific articles for a special issue of Forest Science was the target within this meeting. The absence of some key authors in WG2 was compensated by the contributions of the other authors of the respective papers.

WG2 has planed to provide 4 definite articles for the special issue, including two joint work group articles. One of which will be an over-view article, the other is the bridging function article.

The articles under work are:

1. Bridging functions article

TITLE: Bridging national and reference definitions for harmonised provision of forest information

AUTHORS: Ståhl, G., Cienciala, E., Chirici, G., Lanz, A., Vidal, C., Winter, S., McRoberts, R.E., Rondeux, J., Schadauer, K., and Tomppo, E.

The purpose of the paper is to present a general conceptual framework for different types of bridge functions. Some drafts of the paper were already available and reviewed. The work left was discussed and collaboration with the other WGs agreed.

A bridge function is a tool, statistical or other, to convert an estimate based on the definition other than reference definition to correspond the agreed reference definition.

## 2. Interpolating and extrapolating article

TITLE: *Interpolating and extrapolating forest information for Kyoto Protocol reporting: Choice of method matters!*

AUTHORS: Tomppo, E., Freudenschuss, A., Weiss, P., Heikkinen, J., Hysten, G., cRoberts, R., Nabuurs, G-J., van den Wyngaert, I., Kändler, G., Cienciala, E., Petersson, H., and Ståhl, G.

The focus of the paper was changed somewhat after Lisbon meeting. The current aim of the paper is to demonstrate the errors of the estimates of stock changes based on one year's inventory data only, to study the possibilities of obtaining sufficiently accurate results on, e.g., five years' cumulative change, and to analyse the differences between the 'stock change method' and the 'default method' (increment minus drain), whose relative accuracies are likely to depend on the proportion of (or the existence of) permanent inventory plots. Furthermore, the effect of possible interpolation methods on the estimates is demonstrated.

The difficulties and possible solutions were discussed, as well as the cases to be included.

Some cases were still missing but were agreed to be sent by the beginning of the December.

## 3. Uncertainty assessment

TITLE: Uncertainty assessment of greenhouse-gas emissions from forests based on national forest inventory data – a critical evaluation of the Intergovernmental Panel on Climate change/ Good Practice Guidance recommendations

AUTHORS: Kändler, G., Ståhl, G., Bouriaud, O., Hysten, G., Kusar, G., Petersson, H., Tosi, V., and Cienciala, E.

National forest inventory (NFI) programs are the primary source of information for LULUCF reporting. NFI data are particularly appropriate for a rigorous evaluation of the uncertainty associated with the carbon stock change in biomass estimated from repeated forest inventory cycles. The aim of the paper is to compare the uncertainty assessments to the Tier 1 and Tier 2 uncertainty estimation approaches of the GPG for land use, land-use change, and forestry (LULUCF). Evaluations and recommendations with respect to these options of addressing uncertainty were provided. The details of the paper were discussed and plan to complete the paper made.

Ron McROBERTS, as a key person behind Accuracy symposia, introduced the spatial accuracy symposium 2010, a relevant scientific meeting for the uncertainty assessments, see <http://www.le.ac.uk/geography/splint/accuracyindex.html>.

#### 4 Harmonising greenhouse-gas reporting

*TITLE:* Harmonizing greenhouse-gas reporting from forests – case studies from Europe

*AUTHORS:* Dunger K, Petersson H, Barreiro S, Cienciala E, Colin A., Hylén G, Kusar G, Oehmichen K., Ståhl G., Tomppo E., and Tuomainen T.

The aim of the paper is to demonstrate with the examples the effect of different definitions on the carbon pool changes. The approaches provide guidance that can be used by countries to improve their emission reporting from forests under LULUCF. The case studies were analysed in detail and future plan made.

#### Reference Definition Document

The reference definitions were discussed to ensure that the definitions are harmonised between working groups. The remaining work was identified and allocated to small groups. Core variables and definitions were found not to completely align amongst and within different work groups. Parameters, or constants, whose values are estimated, are not aligned with variables. Therefore, further discussion on the best way to harmonise these variable definitions was elaborated.

The possibly missing definitions were discussed. Examples are increment and drain of the volume of the growing stock.

The aforementioned articles were discussed and collaborated on within sub-groups for the remainder of the afternoon.

#### Modifications to Agenda:

Erkki TOMPPONEN suggested a plenary session after lunch on Tuesday. It was agreed.

#### **Tuesday, October 28, 2008**

Monday's progress was reviewed. Work continued in sub-groups to finish draft manuscripts of the special issue articles.

The article 'Bridging national and reference definitions for harmonised provision of forest information' was discussed. The methods applied to perform the conversion from a local to a reference definition were elaborated.

Further, the article 'Interpolating and extrapolating forest information for Kyoto Protocol reporting' and more methods were discussed. Since reporting data may not be collected annually, the choice of method matters. Furthermore, the interpolation methods affect differently depending on whether default method or stock change method is employed.

The article 'Uncertainty assessment of greenhouse-gas emissions from forests based on national forest inventory data – a critical evaluation of the Intergovernmental Panel on Climate change/ Good Practice Guidance recommendations' was

discussed. The uncertainty assessment compared the Tier 1 and Tier 2 uncertainty estimation approaches of the GPG for land use, land-use change, and forestry (LULUCF). Evaluations and recommendations with respect to these options of addressing uncertainty were provided.

For the article Harmonising greenhouse-gas reporting the case studies and countries were agreed. The aim of the paper is to demonstrate with the examples the effect of different definitions on the carbon pool changes. The approaches provide guidance that can be used by countries to improve their emission reporting from forests under LULUCF. Both the differences in forest definitions and growing stock definitions are considered. The case studies were analysed in detail and future plan made.

### **Wednesday 29 October 2008**

#### Plenary Session:

Mark LAWRENCE opened the plenary with practical matters and departures. Erika TOMPPO then opened the plenary session by discussing the Table of Contents of the Country Book.

Tuesday's progress was reviewed and compared amongst work groups. The work yet to be done was outlined. The status of the special issue articles was reported. Final lists of authors were assigned to the articles, as well as deadlines and primary responsibilities.

#### Country Book

Country reports are now in progress. The deadline for addition to the reports agreed as January 10, 2009.

Responsible persons for each chapter of the country book were identified. Mid-February was agreed as the deadline for the final draft, in order to allow time for typesetting in Helsinki.

Chapters of the Country Book with corresponding authors were assigned.

*The plenary ends at 11:00. Sub-groups then separated for further work with the articles until the end of the meeting.*