



National Statistics Quality Review Series

Report No.19

Review of Forestry Statistics

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Agriculture, Fishing and Forestry Theme

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National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

Review of Forestry Statistics

This is the first review to be published under the National Statistics Agriculture, Fishing and Forestry theme.

Following consultation with users and detailed examination of the five publications covered by the review, it is concluded that the forestry statistics published as National Statistics meet the required quality standards. A number of areas for improvement have, however, been identified.

National Statistics Quality Reviews

The White Paper Building Trust in Statistics sets out the framework for quality assuring National Statistics. A key component of the framework is:

“ a programme of thorough reviews of key outputs, at least every five years, with the involvement of methodologists and outside expertise, as appropriate. ”

This programme of quality reviews is an important way of ensuring that National Statistics and other official statistical outputs are fit for purpose and that we are continuing to improve the quality and value of these outputs.

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Report to the National Statistician

Introduction

1. The Forestry Commission currently publishes a range of statistics on forestry. In August 2001, the five main publications were brought into the scope of National Statistics. These Forestry Commission National Statistics publications are:
 - British Timber Statistics
 - Forestry Commission Facts & Figures
 - Forestry Statistics
 - Sawmill Survey
 - Standing Sales Price Index
2. These publications present statistics from a number of sources, including Forestry Commission-run surveys of businesses, administrative sources and outputs from other Government Departments.
3. The review of forestry statistics, which was launched in March 2002, concentrated on these 5 National Statistics publications.
4. Two further National Statistics publications in the form of First Releases have been produced since the start of the review. The first, on “UK wood production and trade” was introduced to ensure that National Statistics data were published before being released to international organisations. The contents of this publication make use of existing sources of data used for British Timber Statistics and Forestry Statistics. The second publication, on “Woodland area, planting and restocking”, enabled the Forestry Commission to meet its commitment to release data as soon as possible by publishing information which is available in both Forestry Commission Facts and Figures and Forestry Statistics three months earlier than in previous years. Both of these publications were produced towards the end of the review and, as a result, users did not have sufficient opportunity to comment on them. Neither of these First Releases have therefore been included within the scope of the review.
5. This report was initially prepared in August 2002. Since then, a number of the original recommendations have either been implemented or overtaken by events. The report has been updated, where necessary, to reflect these changes.

Summary of Review Findings

6. The five Forestry Commission National Statistics publications covered by the review are generally considered to be of an acceptable standard and are produced in an efficient and cost-effective manner. The publications largely comply with existing National Statistics requirements, although some additional work will be required in order to comply with the Code of Practice Protocols which are currently in various stages of development.
7. Improvements in the quantity and accessibility of statistics electronically should be a key area for development. In addition, current work on developing electronic returns (possibly through the use of web-based solutions, as are being developed by the Department for Environment, Food and Rural Affairs) should continue.
8. A number of gaps in the published statistics were identified by the review team and by respondents to the user consultation exercise. One of the main issues raised was the need for statistics to be more responsive to the Forestry Strategies for England, Scotland and Wales. In particular, there is currently a strong focus on the industrial aspects of forestry and limited information available on other aspects such as social and environmental statistics. The current position reflects, to some extent, the availability and quality of existing data. However, this position is beginning to change, with the work being undertaken by the Economics and Statistics Unit at present on the development of indicators of sustainable forestry. Further improvements will be required, including the identification and development of new data sources, to ensure that future forestry statistics provide a complete and balanced view of all aspects of forestry.
9. Following devolution in Scotland and Wales, the need for statistics at a country (i.e. England, Scotland and Wales) level has increased, either in addition to or instead of at a Great Britain/ United Kingdom level. This demand is likely to continue growing, along with demands for more detailed geographical breakdowns (particularly for English regions). Future developments in the Forestry Commission's National Statistics publications will need to ensure that detailed geographical breakdowns are provided wherever possible, subject to data quality and confidentiality constraints. In particular, the introduction of separate country level compendium publications (along the lines of Forestry Statistics) is recommended, in addition to the existing UK level publication.
10. Whilst not specifically within the scope of the review, the review team recognised the importance of forestry statistics at a United Kingdom level, in addition to more detailed geographic breakdowns. This is an issue which Economics and Statistics Unit will wish to pursue with the Forest Service in Northern Ireland.

Scope of the Review

11. The aim of the project was to carry out a Standard Review of all forestry statistics that are part of National Statistics (NS), and others that are proposed for addition to the scope, to confirm that they meet the standards in the NS Code of Practice¹ or recommend changes to meet the standards. In particular, the review would assess the user demand and feasibility of making improvements to forestry statistics for Scotland, Wales and England.

12. The review was overseen by a Review Board, consisting of

- Chair & Review Sponsor: Simon Gillam, FC Head of Profession for Statistics
- Colin Morton, FC Communications
- Graham Cullen, FC Country Services
- Paddy Harrop, Forest Enterprise
- Peter Wilson, Forest Industries Development Council
- Ray Wilson, Department for Environment, Food and Rural Affairs (DEFRA)
- David Canham, Office for National Statistics (ONS)

13. The Review Team consisted of

- Review Manager: Sheila Ward, Statistician, FC Economics and Statistics Unit (ESU)
- Vicky West, Assistant Statistician, FC ESU
- Alister Henderson, FC ESU
- Jackie Harper, FC ESU
- Mike Prestwood, ONS (Inter-Departmental Business Register issues)

Outputs Covered by the Review

14. The review focused on the five National Statistics publications produced by the Forestry Commission. These are:

- British Timber Statistics – an annual compendium of statistics relating to the supply and demand of GB grown timber.
- Forestry Commission Facts & Figures – a pocket-sized annual compendium providing key statistics relating to forestry in Great Britain.
- Forestry Statistics – a detailed annual compendium providing statistics on all aspects of forestry in the United Kingdom.
- Sawmill Survey – a biennial report providing results from the Forestry Commission’s survey of sawmills in Great Britain.
- Standing Sales Price Index – a bi-annual First Release presenting price indices for Forest Enterprise sales of standing timber.

¹ The NS Code of Practice and 2 associated Protocols were published on 25 September 2002. The remaining Protocols are currently in various stages of development.

15. In addition, the review aimed to make an initial assessment of the desirability and feasibility of extending the scope of National Statistics produced by the Forestry Commission to include outputs from the Forest Employment and Public Opinion of Forestry surveys.

User Consultation

16. Consulting users and providers of forestry statistics formed a major element of the review. This was achieved through face-to-face interviews of key stakeholders, targeted e-mails to individuals and organisations with a known interest in forestry statistics and through the statistics pages of the Forestry Commission website. A total of 13 responses to the e-mails/ website were received and 8 face-to-face interviews were conducted.
17. The majority of respondents were content with the existing publications. In particular, Forestry Commission Facts and Figures was considered to be an extremely useful handy reference which could be provided to others wishing some background information to forestry. The usefulness of Forestry Statistics as a larger reference book was also mentioned by several respondents and there was strong support for a “glossy”, hard copy version of this publication.
18. A number of gaps in the statistics published were identified by users. Several respondents suggested that the statistics needed to be more responsive to the Forestry Strategies for England, Scotland and Wales. In particular, many noted the currently limited coverage of the environmental and social aspects of forestry, in comparison with the traditional topics relating to the timber industry.
19. Users were generally content with the quality of the data provided, although there were some concerns over the accuracy of data on private sector softwood removals. Several users suggested that improvements could be made to the accessibility and promotion of forestry statistics.
20. There was a general recognition that forestry statistics would be required at an increasingly detailed geographical level. At present, the main need was for country statistics (covering England, Scotland and Wales separately), although there was also a need for regional data for England. Several respondents indicated that the demand for English regional data was likely to increase.
21. In addition to providing statistics at a more detailed geographical level, users also noted the importance of integrating statistics for Northern Ireland with data for Great Britain to produce figures at a United Kingdom level.
22. A more detailed report on the user consultation exercise is provided in Annex B.

Compliance with Code of Practice

23. The five National Statistics publications covered by the review were assessed for their compliance with both the Official Statistics Code of Practice, which was in operation at the time of the review, and the National Statistics Code of Practice, which was then in draft form.
24. Each of the publications largely complies with the existing Code of Practice and the accompanying Statistical Quality Checklist. In particular, British Timber Statistics and the Sawmill Survey provide information on response rates, although quality measures (such as standard errors) are not provided.
25. The publications are also largely compliant with the new Code of Practice and related protocols which are currently in various stages of development. In particular, the recent introduction of two First Releases has enabled statistics on wood production and trade and on woodland area, planting and restocking to be released at an earlier date than in previous years. In addition, statements on the Forestry Commission's release practices and its revisions policy are now provided in all Forestry Commission National Statistics publications. The major area for further work is expected to be the compilation and publication of quality measures.

Survey Methodology

26. The Review Board indicated that one of the key areas to be addressed by the review was the methodology used for the three Forestry Commission surveys, namely:
 - Sawmill Survey
 - Round Fencing Survey
 - Private Sector Removals Survey
27. Each of the surveys is subject to survey control procedures. As a result, the surveys are approved annually by forestry Ministers in England, Scotland and Wales and are reviewed regularly. The surveys were last reviewed in 1998 (sawmill and round fencing surveys) and in 2000 (private sector removals survey) and a number of changes were implemented following these reviews.
28. The analysis of the survey methodology consisted of two stages. Firstly, the current sampling frames were compared with records held on the Inter-Departmental Business Register (IDBR) to assess whether there was scope for using the IDBR either to replace or to augment the existing sampling frames. Secondly, an examination of the questionnaire design, reminder procedures and response rates was undertaken to identify any scope for improvement.
29. The comparison of sampling frames with IDBR records focused on the sawmill survey, as the largest of the three surveys. Records from the Forestry Commission's sampling frame were compared with data held on IDBR and an

examination was made of all businesses recorded on the IDBR under SIC92 category 20100 (Sawmilling & planing of wood, impregnation of wood). Given the broad scope of the current SIC categories, it is considered that the IDBR could not replace the existing sampling frames. However it would be possible, through liaison between Forestry Commission and Office for National Statistics staff, for the IDBR to be used to augment existing sampling frames and it is recommended that this course of action be followed up.

30. Examination of questionnaire design, reminder procedures and response rates for the surveys indicated that current procedures were generally appropriate. The main areas for improvement identified by the review team were the provision of information on data confidentiality and the Code of Practice to respondents and a reduction in the length of the longer biennial Sawmill Survey questionnaire.
31. A more detailed report on the analysis of the survey methodology is provided in Annex C.

Other Methodological Issues

32. The coniferous standing sales price index is currently produced using data from Forest Enterprise administrative systems as a Laspeyres Index, with base year of 1996. There are currently no formal plans to revise the index base. In order to improve transparency, it would be beneficial to have a known strategy for revising the index base. Further, a review of the methodology would be helpful in ensuring that the most appropriate methodology is used. When any change is made, the index should be published on the both the old and new bases, for comparison. An extension to the published figures, to show indices for England, Scotland and Wales separately, should also be considered. Further developments to the index could include an analysis of other factors which may influence prices, such as species mix.

Other Sources

33. The review team also undertook a detailed examination of the non-survey sources used to compile the Forestry Commission's National Statistics publications.
34. The majority of these sources were Forestry Commission and Forest Enterprise administrative systems, including information on woodland grants and on Forest Enterprise timber production. The use of administrative systems was considered to represent the most efficient and cost-effective means of obtaining data on Forestry Commission and Forest Enterprise activities. It should be noted, however, that Economics and Statistics Unit do not have either the resources or the knowledge to undertake detailed checks on the data obtained and are reliant on the quality of the administrative systems.
35. Other sources include industry associations (consumption of British roundwood by pulp & paper and wood-based panel industries) and other Government

Departments (imports & exports, VAT registered businesses). Again, these sources represent the most efficient and cost-effective means of obtaining data.

36. However, it is essential that data from other sources are reliable and up-to-date. Economics and Statistics Unit have now addressed recent problems in obtaining data for wood-based panel products by establishing an alternative source. In addition, it is recommended that work be undertaken to establish a more reliable source of fuelwood statistics.
37. Economics and Statistics Unit will also need to be aware of potential changes to the inputs used by paper mills (with a likely increase in recycled paper) and the effects that this may have on the statistics currently collected.
38. In order to maximise efficiency and minimise the risk of errors, Economics and Statistics Unit should obtain data electronically wherever possible. Some of the data obtained from other sources is already obtained in this way, however it is recommended that the detailed information required on imports and exports also be obtained electronically.

Publications

39. The review team analysed the procedures used to produce the Forestry Commission's National Statistics publications to ensure that they comply with the standards set out in the National Statistics Code of Practice and Release Practices Protocol. At present, the release practices largely comply with National Statistics standards. In particular, publications are pre-announced on the Forestry Commission website for the full year ahead, on a six monthly basis.
40. The review team also considered other issues relating to the Forestry Commission's National Statistics publications, including content, format and accessibility. The development of quality measures will be required in order to comply with the Code of Practice protocol being developed on Quality Management. In addition, there is scope for improvement in the availability and accessibility of data on the Forestry Commission website. Whilst the current publications provide a broad range of statistics relating to forestry, Economics and Statistics Unit should consider whether the website could be more fully utilised, to provide additional detail which cannot easily be provided in traditional paper-based publications.
41. At present, all publications are available free of charge on the Forestry Commission website. Hard copies of Forestry Commission Facts and Figures are available free of charge, as are First Releases (such as the Coniferous Standing Sales Price Index). Hard copies of other publications are priced to cover the costs of reproduction. Economics and Statistics Unit plan to review their pricing policy in line with the forthcoming Code of Practice Protocol on Presentation, Dissemination and Pricing.
42. All of the Forestry Commission National Statistics publications are published in English, whilst Forestry Commission Facts and Figures is also published in

bilingual (English and Welsh) format. It is proposed that any future publications relating to Wales only should also be available in bilingual format.

43. Recent changes to procedures have been implemented to separate statistical and news releases and to ensure that a named statistician contact is provided on all statistical releases. To improve openness, a statement on statistical release practices is now provided in all Forestry Commission National Statistics publications, along with a statement on the Forestry Commission's revisions policy. The revisions policy may require further development following the publication of the Code of Practice Protocol on Revisions.
44. A full year ahead programme of statistical releases is now updated on the Forestry Commission website on a monthly basis. On a presentational front, the Forestry Commission and National Statistics logos now have equal prominence on all relevant publications and "Forestry Commission Facts and Figures" has been retitled "Forestry Facts and Figures", to reflect the fact that the information provided is broader than just Forestry Commission statistics. Another recently implemented improvement is the provision of sources for all published statistics.

Documentation

45. The team reviewed the documentation which currently exists for each publication and each data source. Analysis of Current Practice templates had been completed for all outputs and any issues identified in them have been considered as part of the review. In addition, desk instructions have been prepared for each National Statistics publication. These are generally up-to-date, although some minor amendments are required to the instructions for Forestry Statistics to reflect the ordering of tables as published (this is currently being undertaken by Economics and Statistics Unit).
46. In terms of metadata, all sources and products are included in StatBase, with links permitting access to PDF versions of publications from the product entries. All StatBase entries are currently up-to-date or (for the most recent publications) in the process of being updated. There are, however, currently no metadata provided on the Forestry Commission website. It is recommended that the website be extended to include metadata, along the lines of a simplified version of StatBase, which could in future provide a means of access to data.
47. The metadata provided on the Forestry Commission website should also be extended to provide information on methodologies, where relevant. Two particular topics would benefit from such an approach: the methodology used to calculate woodland area and the methodology used by trade associations to estimate figures for non members.

Statistics Published by Other Countries

48. At the launch of the review, the Review Board requested that the Review Team consider the forestry statistics published by other countries. The exercise, which focused on the internet publications of 6 countries, found some good examples of both traditional compendium publications and on-line access to analysis. It is recommended that the compendium publication produced by the Finnish Forest Industries Federation and the on-line system produced by the Canadian Forest Service be used by Economics and Statistics Unit as good practice guidance in both the presentation of statistics and the accessibility of on-line data.
49. In addition, the exercise identified a few topics which could be added or expanded on in current Forestry Commission publications, including turnover, capital investments, earnings, fuels and international statistics. As an initial step, it is recommended that consideration be given to extending the current range of statistics published to include data on woodfuel and basic economic information on forestry.
50. A more detailed report on this exercise is provided in Annex D.

Non-National Statistics Outputs

51. The review team made an initial assessment of the desirability and feasibility of extending the scope of NS produced by the Forestry Commission to include outputs from the Forest Employment and Public Opinion of Forestry surveys.
52. At present, the Forest Employment Survey is carried out at intervals of around 5 years. The scope of the survey is not determined by statistical staff and the contents can vary with policy interests, leading to results which may not be comparable across surveys. Whilst it would be desirable to include this survey within the scope of National Statistics, a stronger statistical control of the survey (to ensure comparability) and a more frequent timescale (to ensure relevance) would be required. In addition, existing user concerns over the quality of the results, arising from potential double counting or exclusion of businesses, will need to be addressed. The use of the IDBR to assist in compiling sampling frames would assist with this issue. In conclusion, it would be desirable to include the Forest Employment Survey within the scope of National Statistics. Consideration of whether to pursue National Statistics status should be made in consultation with stakeholders (including the wider forestry industry) and it may be preferable to delay the forthcoming survey (due in 2003-04) in order to allow improvements to be put in place.

53. The Public Opinion of Forestry Survey is carried out at 2 year intervals by market research companies on contract to the Forestry Commission. The survey, which is carried out using quota sampling, is valued and respected by users. A move to random sampling is not considered necessary, given that the current sampling design meets users' needs. Again, the inclusion of this survey within the scope of National Statistics is desirable. Prior to any change in status, however, future contracts with market research companies will need to ensure that the companies comply with the National Statistics Code of Practice and related Protocols. In particular, any quality measures reported (such as confidence intervals) must be measured appropriately given the sample design. It is recommended that National Statistics status for this survey be pursued.

Recommendations

54. The recommendations of the review team, taking account of both the issues identified from the user consultation exercise and the findings of the review team are listed below. The recommendations have been listed under 9 headings, as follows:

- Section A provides general recommendations which are applicable to all outputs.
- Sections B to F provide specific recommendations for each of the five National Statistics outputs covered by the review.
- Section G provides recommendations relating to the Forestry Commission-run surveys which are used in British Timber Statistics, Forestry Commission Facts and Figures, Forestry Statistics and (where relevant) the Sawmill Survey.
- Section H provides recommendations for addressing gaps in the currently published statistics.
- Section I identifies areas for consideration in the development of the two surveys not currently included within the scope of National Statistics to bring them into scope.

A. General recommendations

- A.1 Quality measures should be developed and made available to users in line with the forthcoming draft Code of Practice Protocol on Quality Management.
- A.2 Greater use should be made of graphs and maps to illustrate key messages in publications. The compendium publication produced by the Finnish Forest Industries Federation could serve as a useful example of good practice.
- A.3 ESU should consider the consequences for the statistics they produce arising from the forthcoming Freedom of Information Act.

- A.4 ESU should consider making statistics available on the Forestry Commission website in a more detailed form than is available in publications.
- A.5 The statistical information published on the Forestry Commission website should be extended to include metadata.
- A.6 ESU should pursue with HM Customs & Excise the possibility of obtaining data on imports and exports of wood and wood products electronically.

B. British Timber Statistics

- B.1 ESU should find out from industry associations the methodology used to estimate figures for non-members and include this in metadata (see A.5).

C. Forestry Commission Facts and Figures

- C.1 Consideration should be given to incorporating more time series without unduly lengthening the publication. In particular, the presentation of longer term data in graphical format should be considered.
- C.2 Extension of the coverage of this publication from Great Britain to United Kingdom should be considered.
- C.3 ESU should consider replacing the existing table showing Forest Enterprise recreational facilities with alternative, more useful data which could be included as a time series.
- C.4 Two of the tables are limited to Forest Enterprise only, whilst the remainder relate to all forestry in Great Britain. The presentation should make clear that only an incomplete picture of forestry in Britain is provided in these tables.

D. Forestry Statistics

- D.1 New publications, along the lines of Forestry Statistics should be produced separately for England, Scotland and Wales. Given that there is still an interest in, and a need for, statistics at a UK level, these new publications should be additional to the existing Forestry Statistics publication. The publication for England should, where possible, provide data at regional level. The publication for Wales should be bilingual.
- D.2 The methodology used to produce estimates of woodland area should be clearly explained and included in metadata (see A.5).

E. Sawmill Survey

- E.1 ESU should investigate the scope for standardising the units of measurement used on the sawmill survey questionnaire to cubic metres, to avoid confusion.
- E.2 ESU should consult the Forestry Commission Advisory Panel Subcommittee on Supply and Demand and the sawmilling industry on a significant reduction to the length of the “long” questionnaire, sent to larger sawmills biennially, to reduce compliance costs and encourage responses.

F. Standing Sales Price Index

- F.1 The methodology for the index base should be reviewed, to consider introducing chain-linking or revising the index base at regular, known, intervals of around 10 years. If the index base is changed, figures should be published on both bases. The review should be completed in time for a change in 2006.
- F.2 The effect on prices of differences in the species mix and other factors should be investigated.
- F.3 Publication of price indices by country should be considered.

G. Forestry Commission Surveys

- G.1 The discrepancy between results from the Private Sector Softwood Removals Survey and figures for deliveries of roundwood should be investigated and addressed. In particular, current assumptions concerning the proportion of harvesting accounted for by survey respondents and the suitability of the existing sampling frame should be evaluated. This should be a priority for action.
- G.2 The Inter-Departmental Business Register (IDBR) should be used to augment existing sampling frames held by the Forestry Commission and ESU should pursue with ONS the possibility of flagging forestry businesses on the IDBR.
- G.3 Further information on data confidentiality and the National Statistics Code of Practice should be provided to respondents as an assurance that any data they provide will be treated in confidence.
- G.4 Electronic submission of returns should be permitted and promoted. In particular, consideration should be given to the use of web-based returns, as are being developed by DEFRA.

- G.5 Data queries should be followed up with respondents. In order to reduce the burden on small businesses, this should be restricted to the large sawmills (those producing over 5,000 m³) in the Sawmill Survey only, which saw 90% of the total volume.
- G.6 Phone call reminders (as currently undertaken for the Sawmill Survey) should be restricted to the large mills only, to maximise efficiency.
- G.7 An additional final step should be added to the reminder procedures to give non-respondents an opportunity to see and correct the estimates which will be made for them if they fail to reply.

H. Addressing Gaps in Existing Statistics

- H.1 ESU should consider extending the published data to include additional statistics on ancient and native woodlands.
- H.2 New data sources should be investigated and existing sources developed to provide statistics on progress towards national biodiversity action plan (BAP) and habitat action plan (HAP) targets.
- H.3 The possibility of obtaining data for all forest fires from Fire Services should be investigated. [This is not a high priority, given the relatively low level of fire damage in the UK.]
- H.4 The information published in Forestry Statistics from the National Inventory of Woodlands and Trees should be extended to include data on type of owner and to extend the data on species composition and age structure.
- H.5 The possibility of publishing additional information related to planting, including previous land use and species planted, should be investigated.
- H.6 The possibility of obtaining and publishing data on woodlands on farms from Agricultural Censuses should be investigated.
- H.7 The statistics published on grant schemes should be extended to include the Farm Woodland Premium Scheme and the Energy Crop Scheme in England.
- H.8 New data sources should be investigated and existing sources developed to provide statistics on the use of wood as fuel for domestic, industrial and power station use.
- H.9 New data sources should be investigated and existing sources developed to provide statistics on the use of recycled fibre by wood processing plants.
- H.10 The possibility of obtaining and publishing data on the transportation of timber (mode of transport and distances) should be investigated.
- H.11 Estimates of the total value to the economy of the forestry sector should be developed and published. This should ultimately be available by country and for English regions and should incorporate multiplier effects.

- H.12 Statistics on the UK wood and wood product market should be published, showing production, imports and exports by category of product.
- H.13 Statistics on the UK position in the global trade in wood and wood products should be published.
- H.14 Forestry Statistics should be extended to include the IPD Forestry index (which gives investment returns, produced from a sample of private sector coniferous plantations of Sitka spruce in mainland Britain).
- H.15 ESU should investigate the scope for extending the price data published to include sawlog prices, prices from private sector woodlands, prices of logs delivered to processors and sawnwood prices.
- H.16 New data sources should be investigated and existing sources developed to provide statistics on timber certification.
- H.17 The existing Forestry Statistics table on Community Forests should be extended to include data on the National Forest.
- H.18 ESU should investigate possible sources for data on community forestry and on public access to woodlands.

I. Non National Statistics Publications

- I.1 Final control over the content and scope of the Forest Employment Survey should rest with professional statistical staff, to encourage comparability of results across surveys.
- I.2 The Forest Employment Survey should be carried out more frequently and at known intervals to ensure that results are up-to-date and relevant.
- I.3 The Inter-Departmental Business Register (IDBR) should be used to assist in the compilation of sampling frames for the Forest Employment Survey.
- I.4 Statistics on indirect employment (e.g. suppliers to forestry industries) should be obtained from ONS surveys or from development of the Forest Employment Survey.
- I.5 ESU should consider whether to pursue National Statistics status for the Forest Employment Survey in consultation with key stakeholders.
- I.6 ESU should consider delaying the 2003-04 Forest Employment Survey to allow improvements to be put in place.
- I.7 Future contracts with market research companies employed to undertake the Public Opinion of Forestry Survey should ensure that National Statistics standards are met.
- I.8 The methodology used to produce quality measures for the Public Opinion of Forestry Survey should be made available.
- I.9 National Statistics status for the Public Opinion of Forestry Survey should be pursued.

ANNEX A: Project Initiation Document

Introduction

The White Paper “Building Trust in Statistics” set out the framework for quality assuring National Statistics, through a programme of thorough reviews of key outputs at least every five years. This Project Initiation Document (PID) relates to the review of forestry statistics, which was agreed as part of the 2001-02 to 2003-04 National Statistics Workplan for the Agriculture, Fishing and Forestry theme.

Background

Prior to 2001-02, no Forestry Commission (FC) statistical outputs had a Government Statistical Service (GSS) or National Statistics (NS) logo. Proposals to bring the main outputs into the scope of National Statistics were approved by Ministers in August 2001. A programme of work from July 2000 to August 2001 aimed to bring all proposed NS systems up to NS standards. The NS scope now covers most FC statistical outputs that are annual (or more frequent), but excludes most that are on a longer cycle.

At present, all FC NS outputs are presented at GB or UK level, but may include statistics broken down by country: England, Scotland, Wales (and Northern Ireland).

Project Organisational Structure

The review has been set up under the umbrella of the National Statistics Agriculture, Fishing and Forestry Theme Working Group.

A Review Team will be led by a Review Manager, who will take responsibility for the day-to-day running of the review and will be the first point of contact for issues relating to this review. The Review Team members are:

- Review Manager: Sheila Ward, Statistician, FC Economics and Statistics Unit (ESU) (60 days)
- Vicky West, Assistant Statistician, FC ESU (20 days)
- Alister Henderson, FC ESU (15 days)
- Jackie Harper, FC ESU (5 days)
- external methodologist acting as consultant (£6000 budgeted).
- input from the FC ESU staff responsible for the statistical systems (30 days)
- input from other FC staff who are data providers or users (10 days).

Contact details for the Review Manager are:

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The Review Team will report to a Review Board who will provide overall management and guidance to the review and provide overall project strategy. The Review Board will be chaired by the FC Head of Profession for Statistics, who is also the Review Sponsor, and will include representatives of data suppliers and users of statistics. The membership of the Review Board is:

- Chair & Review Sponsor: Simon Gillam, FC Head of Profession for Statistics
- Colin Morton, FC Communications
- Graham Cullen, FC Country Services
- Paddy Harrop, Forest Enterprise
- Peter Wilson, Forest Industries Development Council
- Ray Wilson, DEFRA
- David Canham, ONS (correspondence member)

The Review Board will approve the final report before it is submitted to the National Statistician. His approval of the final report is required before it is put in the public domain.

Project Objectives, Scope and Outcome

The aim of this project is to carry out a Standard Review (as described in Annex B of the “Guidance On The National Statistics Quality Review Programme Version 1.2”) of all forestry statistics that are part of National Statistics (NS), and others that are proposed for addition to the scope, to confirm that they meet the standards in the NS Code of Practice² or recommend changes to meet the standards. The outputs to be covered by the review are listed below.

1. Current NS Outputs (70%)

The review will assess the following Forestry Commission NS publications against the standards in the NS Code of Practice and related protocols, and recommend any changes. This should include assessments of how well the outputs meet users’ needs, the quality of data from administrative systems, the conduct of statistical surveys, methodologies used to compile the statistics, documentation of the systems and the arrangements for publication.

- British Timber Statistics
- Forestry Commission Facts & Figures
- Forestry Statistics
- Sawmill Survey
- Standing Sales Price Index

2. Country Statistics following Devolution (20%)

For GB forestry statistics that have NS outputs, the review will assess the user demand and feasibility of making improvements to forestry statistics for Scotland, Wales and England, considering both the potential availability of data and changes to publications.

It is proposed that work to improve the integration of forestry statistics for Great Britain (produced by the Forestry Commission) with those for Northern Ireland (compiled by the Forest Service) be taken forward outwith the scope of this review.

3. Possible Additional NS Outputs (10%)

The review will make an initial assessment of the desirability and feasibility of extending the scope of NS produced by the Forestry Commission to include outputs from the following systems (any recommended for inclusion in NS would be subject to more detailed study and improvement, outside the scope of this review).

- Forest Employment Survey (5 year intervals, next 2003)
- Public Opinion of Forestry (2 year intervals, next 2003)

² The NS Code of Practice is currently under consultation and is not expected to be finalised until summer 2002.

Timescales

The main milestones for the review are provided below:

Date	Milestone	Undertaken by
February 2002	<ul style="list-style-type: none">• Finalise first version of Project Initiation Document (PID)• Appoint members to Review Board	Review Team Review Sponsor
March 2002	<ul style="list-style-type: none">• Hold first meeting of Review Board to formally approve PID	Review Board
March – May 2002	<ul style="list-style-type: none">• Undertake research and assemble draft report	Review Team
April 2002	<ul style="list-style-type: none">• Interim report (incorporating emerging findings) to Review Board	Review Team
June 2002	<ul style="list-style-type: none">• Present draft report to Review Board	Review Team/ Review Board
July 2002	<ul style="list-style-type: none">• Revise report and issue for consultation to AFF Theme Group, ONS and Review Board	Review Team/ consultees
September 2002	<ul style="list-style-type: none">• Finalise report	Review Team

A draft workplan is provided in Appendix 1.

Risk Log

The following have been identified as risks to the successful completion of the project as specified.

Risk	Likelihood	Impact	Countermeasure
Review Team members unable to devote sufficient time to project	High	High	Ensure Review is included as key task in forward job descriptions. Re-allocation of workload within Economics and Statistics Unit, if required.
Loss of key staff from the Review Team	Medium	High	Ensure adequate documentation is maintained in order to facilitate any staff changes with minimum impact.
Lack of co-operation from key stakeholders or inability to co-operate due to resources	Medium	Medium	Ensure early informing and involvement of key stakeholders via Review Board.

Quality Assurance of Review Process

Responsibility for the Quality Assurance of the review formally lies with the Review Board. The Review Board have agreed to delegate this function to David Canham, ONS.

Communication Plan

The following communications are planned in relation to the quality review:

Communication	Action
Announcement on FC website	Review Team
Publication of PID on FC and NS web sites, after approval by Review Board, and alert/ consult stakeholders	Review Team/ ONS
Publication of final report, after approval by Review Board and National Statistician	Review Team/ ONS
Publication of Departmental responses	FC

Further details on the proposed strategy for stakeholder involvement are provided in Appendix 2.

Project Controls and Management Issues

The day-to-day management of the review is the responsibility of the Review Manager, who will brief the Review Board on a regular basis and will be the primary point of contact for the review.

Roles and Responsibilities

The **Review Manager** is responsible for ensuring that the review produces the required products, to the required standard of quality and within the specified constraints of time and cost. The specific responsibilities of the Review Manager are:

- plan and monitor the review
- manage the production of the required products
- produce and maintain the Project Initiation Document (PID)
- report to the Review Board on the progress of the review and on any problems encountered
- identify and obtain any support and advice required for the management, planning and control of the review
- arrange for appropriate review documentation to be put on the National Statistics website.

The **other Review Team members** work with the Review Manager in the planning and execution of the review. The specific responsibilities of the Review Team members are:

- undertake the planning, research and analysis required for the completion of the review
- with the Review Manager, prepare the draft report for presentation to the Review Board
- identify any risks or problems during the life of the review and raise these with the Review Manager

The **External Methodologist** will investigate the potential for increased use of the Inter Departmental Business Register (IDBR) for forestry National Statistics. This will include:

- advise on the potential use of records from the IDBR to supplement FC sampling frames, confirming that IDBR cannot replace the FC sampling frames;
- investigate the IDBR classification of businesses in FC sampling frames that do not match with SIC 201 in IDBR, to improve the understanding of the classification of wood processing businesses in IDBR and ONS surveys;
- investigate the potential use of ONS surveys based on IDBR to provide statistics about a wider range of wood-based industries, including processing of imported timber and secondary processing.

This work may be undertaken by an ONS methodologist with good knowledge of IDBR, rather than someone from outside government.

The **Review Sponsor** acts for the Theme Working Group in an executive capacity and is primarily responsible for ensuring that the review has sufficient resources to meet its objectives. The specific responsibilities of the Review Sponsor are:

- create a review brief from the Theme Working Group's mandate
- recruit a Review Manager
- ensure that the key issues are addressed
- ensure that the review is managed effectively
- ensure that the consultation processes have been appropriate and that information from these processes has been addressed appropriately

The **Review Board** approves all major plans and authorises any major deviations from these plans. It is the authority which signs off the completion of each stage of the review and arbitrates on any conflicts within the review. It approves the responsibilities of the Review Manager and Review Team members and any delegation of its project assurance responsibilities. The specific responsibilities of the Review Board are:

- initial approval of the Project Initiation Document (PID) and any subsequent changes to this document during the life of the document
- provision of overall guidance and direction to the review, ensuring it remains within any specified constraints
- consideration of the potential sensitivity of the review's findings
- ensure that stakeholders are appropriately consulted throughout the review
- approval of the final review report
- decisions on recommendations for follow-up actions

Appendix 2: Stakeholder Involvement

One of the key purposes of National Statistics Quality Reviews is to assess whether users' requirements are being met from the current set of outputs. In order to address this aspect of the review, a series of actions are proposed.

Website

The review will be publicised on the Forestry Commission and National Statistics websites, with a general invitation to comment.

Direct Contact

E-mail will be sent to a wide range of users and providers, notifying them of the review and inviting them to comment. Those to be contacted will include those currently being consulted on the proposed indicators for sustainable forestry, industry associations who are data providers and members of the Forestry Commission Advisory Panel Sub-Committee on Supply and Demand.

Stakeholder Interviews

The review team will conduct face-to-face interviews of key stakeholders.

ANNEX B: USER CONSULTATION

Introduction

A major part of the review involved consultation with users and providers of forestry statistics. The user consultation was undertaken in 3 ways:

- a review page was set up on the statistics area of the FC website, inviting users to comment;
- e-mails notifying users of the review and inviting comments were sent to a wide range of users and providers;
- a small number of key stakeholders, representing the main users and providers of forestry statistics, were invited to participate in face-to-face interviews.

The consultation invited views on any aspects of forestry statistics, but particularly sought views on 3 questions relating to the five Forestry Commission National Statistics publications.

A total of 13 responses to the e-mails/ website were received and a further 8 stakeholder interviews were undertaken. Those who contributed included representatives from the following organisations:

- Countryside Agency
- Coed Cymru
- Department for Environment, Food and Rural Affairs
- Environment Agency Wales
- Firn Crichton Roberts Ltd
- Forestry & Timber Association
- Forestry Commission
- FC National Office for England
- FC National Office for Scotland
- Forest Enterprise
- Forest Industries Development Council
- Scottish Borders Council
- Scottish Executive
- United Kingdom Forest Products Association
- University of East Anglia
- Woodland Trust

A summary of the responses received is provided below.

Question 1: Do current Forestry Commission National Statistics publications meet your needs for statistics? Are there any gaps in the information provided in these publications?

Those who provided comments were generally happy with the data published, although a few noted the need for better linkages with the English, Scottish and Welsh forestry strategies.

The following topics were identified as areas for which no/ limited statistics were currently available:

Social aspects of forestry

- Community forestry
- Public participation in forestry
- Tourism
- Recreation in private sector woodland

Environmental aspects of forestry

- Carbon
- Contribution of forestry sector towards national biodiversity action plan (BAP) and habitat action plan (HAP) targets
- Ancient woodland and native woodland
- Fire damage to private sector woodland

Woodland area and ownership

- Species composition by area, volume
- Age structure
- Woodland creation
- More detailed information on planting
- Categories of planted land
- Nursery stock
- Farms with woodland schemes
- Ownership size and structure

Timber and wood products

- Timber quality
- Timber productivity by yield class, actual yield
- Recycled fibre used by wood processing plants
- Use of wood as fuel
- End uses of wood
- Timber transport

Forestry in the economy

- Total value of forestry to the economy
- UK market share of global trade
- Investment returns, e.g. IPD index
- Up-stream and down-stream economic activity
- Other price data, e.g. log index, average prices, price index for the private sector, range of prices
- Costs of extraction and haulage

Employment and training

- Labour market intelligence
- Knock-on employment (multiplier studies)
- Qualifications and training

Other topics

- Certification
- Contribution of forestry sector to rural development
- Multiple uses of forestry

Question 2: What improvements, if any, could we make to the Forestry Commission National Statistics publications in terms of presentation, accessibility, frequency, timeliness, accuracy and/ or relevance?

The majority of respondents were content with the current publications. In particular, Forestry Commission Facts and Figures was considered to be an extremely useful handy reference which could be provided to others wishing some background information to forestry. Whilst many noted the usefulness of Forestry Commission Facts and Figures in its present format, there was also a suggestion that more time series would be useful.

The usefulness of Forestry Statistics as a larger reference book was also mentioned by several respondents and there was strong support for a “glossy”, hard copy version of this publication. However, there was also a suggestion that this publication was too long and duplicated British Timber Statistics. In addition, it was considered that Forestry Statistics would benefit from additional charts, maps and commentary, and improved visual presentation.

A number of possible improvements were mentioned. It was noted that lengthy publications were cumbersome to download from the internet and that access to data on the internet could be improved. There may also be a place for improved/additional promotion and publicity of statistical publications and the availability of data. In addition, it was considered that users may prefer simplified information, perhaps via an increased use of graphs, to avoid the main messages being “drowned” in lots of detail.

There were also requests for better integration of datasets between departments and a need for improvements to address the issues identified in the Forestry Strategies for England, Scotland and Wales.

The accuracy of removals data (and also sawmill survey) was questioned, along with concern over the lack of data on wood-based panels. However, some respondents also expressed a preference for approximate values rather than no data.

A few more detailed comments on particular aspects of the Forestry Commission’s National Statistics publications were also made. Firstly, it was noted that the term “private woodlands” was misleading, as it was used to cover all non Forestry Commission owned woodland, including woodland owned by other public sector organisations (e.g. local authorities). This has now been changed to “non-FC”, for clarification. Secondly, there was some doubt over whether the current table on recreational facilities in Forestry Commission Facts and Figures gave the most appropriate information on recreation. Finally, that some thought should be given to the most suitable presentation for 2 of the tables in Forestry Commission Facts and

Figures, which (unlike the other tables in this publication) relate only to Forestry Commission owned woodland.

Question 3: Which, if any, Forestry Commission National Statistics publications would you like to see at a more detailed geographic level? At what level would you like to see these statistics - e.g. by country (England/ Scotland/ Wales), by Government Office Regions, etc?

Respondents were generally in favour of statistics being available at country level and there was some recognition that the requirements for more detailed geographical breakdowns (particularly for regions of England) was likely to increase. In addition, some respondents considered that the integration of NI statistics with GB data to produce UK figures was essential.

Other comments

Other comments mentioned by respondents included the importance of the data on indicators of sustainable forestry and a need for improvements to employment data both in terms of the reliability of the data and the topics covered. In addition, it was noted that Economics and Statistics Unit would need to consider the consequences for statistics arising from the forthcoming Freedom of Information Act.

ANNEX C: SURVEY METHODOLOGY

Introduction

The Review Board indicated that one of the key areas to be addressed by the review was the methodology used for the three Forestry Commission surveys, namely:

- Sawmill Survey – an annual survey of around 300 sawmills in Great Britain. Additional questions are sent to larger mills on a biennial basis.
- Round Fencing Survey – an annual survey of around 80 round fencing manufacturers in Great Britain.
- Private Sector Removals Survey – an annual survey of around 35 timber harvesting companies in Great Britain.

Each of these surveys is approved annually by forestry Ministers in England, Scotland and Wales as part of the Forestry Commission's survey control procedures.

The survey control procedures also require surveys to be regularly reviewed. The most recent reviews took place in 1998 (sawmill and round fencing surveys) and in 2000 (private sector removals survey). The 1998 review of the Sawmill Survey recommended a reduction in scope for the longer (biennial) survey from mills producing over 1,000 m³ to only those producing over 5,000 m³, which was implemented for the next biennial survey, run in 2000. A question asking for the source (country) of logs was added to the private sector removals survey in 2001 as a result of the 2000 review.

Given the recent reviews of the surveys, few changes were identified in the course of this review.

The analysis of the survey methodology consisted of two stages. Firstly, the current sampling frames were compared with records held on the Inter-Departmental Business Register (IDBR) to assess whether there was scope for using the IDBR either to replace or to augment the existing sampling frames. Secondly, an examination of the questionnaire design, reminder procedures and response rates was undertaken to identify any scope for improvement.

Comparison with Inter-Departmental Business Register (IDBR)

The comparison of sampling frames with IDBR records focused on the sawmill survey, as the largest of the three surveys. It is planned that similar work, relating to the fencing and removals surveys will be undertaken outwith the scope of the review.

A total of 286 records from the Forestry Commission's sampling frame were compared with data held on IDBR. 245 records were successfully matched against IDBR entries, leaving 41 sawmills which could not be matched, possibly because they are too small to be recorded on the IDBR. Of the 245 matched records, around one half were recorded under the Standard Industrial Classification (SIC92) category

20100, which covers “Sawmilling & planing of wood, impregnation of wood”. The remainder were spread over a total of 28 SIC92 categories, reflecting both the multi-sector activity of many businesses with sawmills and that sawmilling may be a minor activity of the business. The table below provides a more detailed analysis of the results.

Table 1: Number of Sawmills on Sawmill Survey Sampling Frame by Whether Matched to IDBR Records and Standard Industrial Classification (SIC92) category

SIC92 code	SIC92 category	Number of businesses
Matched businesses		
20100	Sawmilling & planing of wood, impregnation of wood	126
51530	Wholesale of wood, construction materials & sanitary equipment	28
2010	Forestry & logging	14
20400	Manufacture of wooden containers	13
20510	Manufacture of other products of wood	12
20300	Manufacture of builders' carpentry & joinery	11
	Other SIC92 categories	41
All matched businesses		245
Unmatched businesses		41
All businesses in Sawmill Survey sampling frame		286

In addition, an examination was made of the 1,002 reporting units (all records held, including those which are no longer active) and 622 local units (“live”, i.e. active, records only) which were recorded on the IDBR under SIC92 category 20100. The results from this exercise reflected the broad scope of this category, which covers planing of wood and impregnation of wood as well as sawmilling. Based on the names of the businesses involved, a large proportion of the units recorded on the IDBR under SIC92 category 20100 related to timber preservation and joinery and would not therefore be expected to fall under the scope of the Sawmill Survey. In other cases, it is likely that many of the sawmilling businesses use only imported timber or operate only mobile (rather than fixed) mills. As the Sawmill Survey is restricted to businesses with fixed mills sawing British roundwood, these businesses would also be out of scope of the survey. It is possible that a more detailed SIC breakdown within the classification system may assist this issue and the Eurostat Operation 2007 classification project may provide an opportunity for such a change.

Given the broad scope of the current SIC92 categories, and the inclusion of many sawmills under a wide range of SIC92 categories, it is unlikely that the IDBR could fully replace the existing sampling frames. However it would be possible, through liaison between Forestry Commission and Office for National Statistics staff, for the IDBR to be used to augment existing sampling frames. In particular, the Office for National Statistics have offered to include a “forestry marker” on the IDBR which would enable the easy identification of forestry businesses. It is therefore recommended that the Inter-Departmental Business Register (IDBR) be used to

augment existing sampling frames held by the Forestry Commission and that ESU should pursue with ONS the possibility of flagging forestry businesses on the IDBR.

Other Methodological Issues

Current methodology

Distribution lists for all three surveys have been compiled on the advice of trade associations, through the Forestry Commission Advisory Panel Sub-Committee on Supply and Demand (FCAP SSD). The lists are updated annually in the same way and using any information provided by recipients to the survey. All businesses on the distribution lists are surveyed. For the sawmill and round fencing surveys, it is assumed that the distribution lists give close to 100% coverage; for the private sector removals survey, the distribution list is only intended to include a small number of larger businesses and it is assumed that this represents around 60% of the total softwood volume harvested from non Forestry Commission woodland.

Questionnaires for all three surveys are issued in early January for return by the end of the month. The distribution lists have been compiled in association with trade associations. A reminder letter is sent to all non respondents in mid February. These are followed by telephone reminders, which are generally restricted to the largest businesses in the Sawmill Survey, as resources permit. Any queries on the data received are also usually limited to the largest sawmills, to avoid placing unnecessary burden on small businesses.

Response rates vary from year to year but are generally over 60%. For the 2001 surveys, the response rates were 66% (sawmill and round fencing manufacturers surveys) and 71% (private sector removals survey). In particular, it should be noted that the response rates for larger businesses are generally higher than those for smaller ones so that, for example, the 66% of mills who responded to the 2001 sawmill survey are believed to account for 83% of the total estimated sawnwood production.

Figures are generally estimated for non-respondents using figures provided by these businesses in previous years. For the private sector removals survey however, it is assumed that the year-to-year percentage increase in volumes harvested for non-respondents is the same as the increase for all respondents.

Review Team Analysis

Examination of questionnaire design, reminder procedures and response rates for the surveys indicated that current procedures were generally appropriate. The most urgent area for action is the discrepancy which currently exists between the Private Sector Softwood Removals Survey and the figures for deliveries (obtained from the Sawmill Survey and industry associations). This discrepancy has increased in recent years and therefore needs to be investigated and addressed as a priority.

The distribution lists are generally believed to give a good coverage of relevant businesses. In particular, a recent follow-up survey aimed at identifying any under-

coverage in the sawmill survey, suggested that businesses not covered by the current sawmill survey distribution list accounted for only around 3% of the total softwood produced. Further work in this area, planned for Autumn 2002, will aim to provide a more accurate estimate of the under-coverage in hardwood production.

Recent changes, to provide respondents with copies of published reports and to issue letters from the Chair of the Forestry Commission Advisory Panel Sub-Committee on Supply and Demand are believed to have helped to raise response rates for 2001 and should continue.

Whilst response rates are generally good, there may be scope for some further improvement. A short section in the covering letter distributed with the questionnaires, referring the National Statistics Code of Practice and the requirement to protect confidentiality may assist any businesses reluctant to respond for confidentiality reasons. In addition, the “long” sawmill survey questionnaire, sent to larger mills biennially, currently produces lower response rates (51% in 2000). A significant reduction to the length of this questionnaire may improve the response rates, as well as reducing compliance costs.

Sawmill survey questionnaires may be further simplified by standardising the units of measurement used, to cubic metres, in order to avoid confusion.

Plans to introduce an option for electronic submission of returns may also reduce the burden on businesses and possibly help to improve response rates. In taking this work forward, web-based solutions (along the lines of the forms being developed by the Department for Environment, Food and Rural Affairs for agricultural returns) should be considered.

To improve the accuracy of results, it is considered that a final step in the reminder process may be advantageous. This would give any remaining non-respondents an opportunity to see the figures which are being estimated for them and allow them to replace these estimates with a more accurate figure.

Finally, a formalisation of current arrangements regarding reminders and data queries may help ensure that the surveys are run efficiently. Thus, it would be beneficial to formally restrict both phone call reminders and the following up of data queries to large sawmills in the sawmill survey only (i.e. those producing over 5,000 m³, accounting for 90% of the total volume).

ANNEX D: STATISTICS PUBLISHED BY OTHER COUNTRIES

Introduction

This paper provides a brief summary of the forestry statistics published by other countries. It is restricted to internet publications produced by the following countries:

- Australia
- Canada
- Finland
- New Zealand
- Sweden
- USA

Australia

Facts and figures, giving summary information on the following topics is provided on Australia's National Association of Forest Industries website:

- area of native forest by type, by state or territory and by tenure category
- area of plantation by state or territory
- apparent consumption of sawn timber by source
- apparent consumption of paper by product and source
- apparent consumption of panel products by product and source
- volume and value of exports of woodchips by hardwood/ softwood
- employment by category
- balance of trade in forest products.

This is similar to an online version of Forestry Commission Facts & Figures.

Canada

The Compendium of Canadian Forestry Statistics provides an extensive range of tables, charts and maps on the following topics:

- Forest Inventory – land areas (ownership, productivity class, status), wood volumes, terrestrial ecozone, forest region.
- Allowable annual cut
- Forest fires – numbers, areas burned, fire control expenditures, property losses – by protection zones, productivity class, fire size class
- Forest insects – area of damage
- Forest products – roundwood, maple products, Christmas trees
- Silviculture – harvesting, site preparation, scarification, planting, stand tending, regeneration
- Forest management expenditures – by source of funding and by type of activity
- Revenues and economic profile – including value of shipments, balance of trade, exports, wages and salaries, employment and contribution to the economy

- Pest control product use – application of insecticides/ herbicides by product and application method.

The information is easy to access and future developments of the Forestry Commission website could benefit from a similar approach to on-line access to data.

Finland

The Finnish Forest Industries Federation publishes an extensive “glossy” compendium. Topics covered include:

- Turnover by product, by market area and by countries
- Location of paper and paperboard capacity owned by Finnish Forest Industry Groups
- Capital investments
- Net liabilities
- Value of production of wood products by type of product
- Volume of R&D
- Production by industry and type of product
- Exports by region, by type of product and by value
- Forest balance (annual increment, total drain)
- Area, growing stock and annual growth
- Tree species
- Source of wood raw material
- Transportation of roundwood
- Stumpage prices
- Costs (transportation, haulage, cutting and stumpage)
- Mill fuels by type (including woodfuel)
- Electricity consumption
- Protected areas
- Earnings by industry and occupation
- Labour force by industry
- Forest Industry in Western Europe
- Global Forest Industry

Data are mainly presented in graphical form, with detailed tables at the end.

New Zealand

The New Zealand Ministry of Agriculture and Forestry publish a range of tables covering the following topics:

- Resources – land area by sector, protected areas, planting, roundwood removals and regional wood supply forecasts.
- Sawmilling production by softwood/ hardwood and natural/ plantation.
- Production of wood pulp, paper and paperboard, and panels.
- Production, imports, exports and consumption by type of product.
- Employment, earnings, prices, exchange rates and interest rates.

Sweden

Sweden's National Board of Forestry produce a Forestry Statistics Bulletin, which provides menu-driven access to spreadsheets on the following topics:

- Nature and environment – protected habitats, nature conservation agreements
- Silviculture – soil scarification, beeting, cleaning and seedlings.
- Notification of standing timber
- Marking of standing timber
- Fellings
- Production of coniferous sawnwood
- Production of pulp and paper
- Stock of pulpwood, chips and coniferous logs
- Forest economy
- Stumpage prices
- Prices of roundwood
- Export prices
- Values of forest and real estate
- Foreign trade
- International statistics
- Employment.

USA

Some information found on land areas by type and state, but the information published on the internet appears to be very limited.

Conclusions

As for FC publications, the forestry statistics produced by other countries tend to be heavily focused on timber and wood processing. Possible topics which we could add or expand on include turnover, capital investments, earnings, fuels (including woodfuel) and international statistics.

More usefully, there are some extremely good examples of well presented statistics which Economics and Statistics Unit could learn from. Most noticeably, the statistics for Finland provide an excellent example of a traditional “glossy” compendium publication, making good use of charts and reference tables. The Canadian statistics probably provide the best example of on-line access to data, giving direct access to data on a large range of topics in a well-ordered, easy to use format.