



SINCE THEIR BEGINNINGS IN THE 1940s, the United Nations Economic Commission for Europe (UNECE) and the Food and Agriculture Organization of the United Nations (FAO) have been collecting and disseminating statistics on forest products and forest resources. In line with FAO's mission and goals in forestry, it "collects, analyzes, processes, and disseminates data, information and knowledge on all aspects of forestry in order to assist FAO Members in the formulation of policies and the planning of investments for the development, maintenance, and sustainable utilization of their forest and related resources to meet evolving demands at the local, national, and global levels."¹ The UNECE studies economic and technological problems and developments within

INTERNATIONAL FOREST PRODUCTS STATISTICS

Growing and Better than Ever!

BY ED PEPKE

member countries of the Commission and undertakes the collection, evaluation, and dissemination of economic, technological, and statistical information.² The UNECE and FAO Timber Section in Geneva, Switzerland, carries out the collection, processing, dissemination, and analyses for their 55-country region as the secretariat of the UNECE Timber Committee (with its forest products orientation) and the FAO European Forestry Commission (with its forest resource orientation).

Why is global reporting of statistics needed?

Objective, reliable series of statistics are an essential basis for any analysis within the forest and forest industries sector. Whether a study of the short-term developments, or long-term future trends, the basis will always be a dependable set of statistics. Growing international trade of wood and wood products combined with greater interdependence between trading partners means that analyses cannot rest upon well-known national information but need to be framed in the context of worldwide statistics.

Who uses these statistics and for what purposes?

Key among the large number of users are the international organizations that collect the statistics in the first place. We use them to help our member governments, who in turn use the raw statistics, or our analyses, to make policy decisions. For example, countries considering forest industry sector development need our annual and periodic market studies to determine which products to produce, and what species of trees to plant for those products.

We base our market studies on forest products consumption, production, and trade statistics. The "Forest Products Annual Market Review"³ an issue of the UNECE and FAO *Timber Bulletin*, analyzes the previous and current years' market developments based on the earliest-available annual forest products statistics for the 55-country UNECE region, which includes North America (Canada and the United States), Europe, and the Commonwealth of Independent States (CIS). Gathered annually from officially designated country correspondents, these statistics form the TIMBER database⁴ and the basis of the *Forest Products Annual Market Review* analysis.

On the forest resource side, following collection of new statistics for the *Temperate and Boreal Forest Assessment 2000* and the *Global Forest Resources Assessment (FRA) 2000* one of the most

crucial questions was to compare them with *FRA 1990*, particularly to estimate forest area change. Using the two data sets, FAO recently produced a publication titled *Comparison of Forest Area and Forest Area Change Estimates Derived From FRA 1990 and FRA 2000*.⁵

UNECE and FAO outlook studies make use of both data sets (products and resources) in order to forecast scenarios for the future. The ongoing European Forest Sector Outlook Study⁶ is analyzing the long-term developments in forest products markets as well as in forest resources. FAO also publishes the *State of the World's Forests*,⁷ parts of which are based on the statistics. Our organizations, our partner organizations, and our counterpart agencies produce a number of additional studies based on the statistics.

Other than the international organizations, often government agencies commission forest sector studies from universities, research institutions, or consultants. All of these groups need the same scientific basis for their studies: statistics. We know from frequent inquiries (the FAO forestry statistics website registers more than 10,000 queries per month) and citations in studies that UNECE and FAO statistics provide the backbone for many different analyses by other groups, such as trade associations and their member companies. Examples include: 1) Jaakko Pöyry Consulting's 1999 study on the *Global Outlook for Plantations*;⁸ 2) much of the analysis done by CINTRAFOR; and 3) the SBH-AFOCEL 2000 report on the "European Union energy policy impacts on the forest-based industries," a report prepared for the Confederation of European Paper Industries (CEPI), CEI Bois (an association of forest products industries), and the European Commission.

Many environmental non-governmental organizations have recently started to use UNECE-provided statistics as a basis for their publications and websites because our international statistics are regarded as a neutral and objective source of information.

Universities and research institutions are another main user of our statistics, as evidenced by subscriptions by university libraries. The UNECE and FAO *Timber Bulletin* statistical issues are not only used by researchers, but also as required or supplementary reading for students. Now that the "Forest Products Annual Market Review" issue of

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the *Timber Bulletin* is on our website, we know that parts of it, for example the statistical tables, are regularly accessed and later incorporated into other reports and databases. For example, the Finnish Forest Industries Federation has used certain tables of statistics from that publication in their market information system that is accessed by their member corporations.

Investors are using international statistics in building portfolios. Corporations interested in investments outside their current territory often consult UNECE statistics to get the lay of the land in a foreign country. For example, corporations are increasingly expanding into the growth markets in central and eastern European countries. UNECE statistics provide a bridge to those countries, so our statistics are often sought for fundamental information on specific countries' consumption, production, imports, and exports of forest products, as well as their forest resource base. From the FAO website, investors (and others)

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CONVERSION FACTORS, WHICH ARE STILL
BEING USED TODAY.*

obtain statistics and information on each country's forest products and resources.⁹

In addition to investment planning, companies, (sometimes through consultants) want to know about current and future sources of market competition. A quick look at production and export trends for sawnwood show that unless wood demand expands in Europe, producers in western countries will experience growing competition for both their domestic and their export markets from central and eastern European producers, as well as countries in the Commonwealth of Independent States, especially the Russian Federation. We receive all kinds of requests for statistics from companies, which gives us an indication of what our statistics are used for. Just a couple of months ago we got a request for data from a company that said that all of their negotiated contracts were based on FAO-STAT trade prices (i.e., value divided by volume).

Background

Why the United Nations?

When established, one of the fundamental purposes of the United Nations (UN) was to collect, process, disseminate, and analyze statistics for a variety of different domains. As part of membership to the UN, countries are obligated to respond to official UN statistical questionnaires. When the UNECE Timber Committee was established following World War II, one of its first duties was to equitably distribute mine timbers and sawnwood (lumber and timbers) for reconstruction. And of course one of the first challenges was to determine which countries were timber rich, and which ones needed wood, and how much. That was a question for statistics!

In accordance with the recommendations of the Second Annual Conference of FAO at Copenhagen in September 1946, the FAO Forestry and Forest Products Division undertook the preparation of two statistical programs. The first was concerned with an assessment of the forest resources of the world, their actual and potential productive capacities, and the rates at which they were being used and wasted. The second program provided for the preparation of periodic statements on production, stocks, and consumption of forest products, and international trade in these commodities.

Draft questionnaires for use in both programs were designed by the staff of the Forestry and Forest Products Division and discussed in detail with the Economics and Statistics Division of FAO. Because of the great diversity between units in common use for the measurement of forest products, and because the statistical programs would be worldwide in scope, it was necessary to prepare lists of conversion factors, which are still being used today (e.g., from board feet to cubic meters).

The importance of these statistical programs, and the considerable amount of work that would inevitably fall on participating governments, made it essential to obtain the advice and approval of as many governments as possible before the programs were instituted. Hence, arrangements were made for two statistical conferences, one in North America and the other in Europe. Through this

means, it was hoped to obtain the participation of the largest possible number of governments and to reduce the costs of travel as much as possible. The first FAO Conferences on Forest Statistics were held in Washington, D.C., in February 1947, and in Rome in March 1947.¹⁰

Evolution of forest products statistical databases

Shortly after the founding of the agencies, it became apparent that it would be very valuable to establish a series of annual statistics. The first FAO *Yearbook of Forest Products Statistics* was published in 1947 when databases began to be built. The FAO-STAT electronic database begins with 1961 statistics. The TIMBER database of the UNECE starts in 1964.

Much of the early work went into identifying which statistics could be collected, and defining them. Precise and up-to-date definitions of forest products and forest resources are critical (see sidebar) so that the statistics gathered are meaningful for current uses, as well as being comparable over time for time series purposes. The definitions used and items included in questionnaires are the subject of contentious discussions between the countries that direct the agencies. Definitions can sometimes have legal ramifications for product trade, therefore changes in definitions and addition or subtraction of products' statistical series are done in consultation with countries.

Inter-agency cooperation

These two agencies, UNECE and FAO, have been working together on statistics since their inception. One of the first bodies they established was the Joint FAO/UNECE Working Party on Forest Economics and Statistics (WPFES). And as the name implies, one of its functions is to guide the UNECE and FAO in collecting and reporting the statistics for the 55-country UNECE region. The FAO gathers and reports statistics for 150 additional countries, thus we report on 205 in total.

The Inter-secretariat Working Group on Forest Sector Statistics (IWG) was established in 1995. The objectives of the IWG are to: 1) provide a better ser-

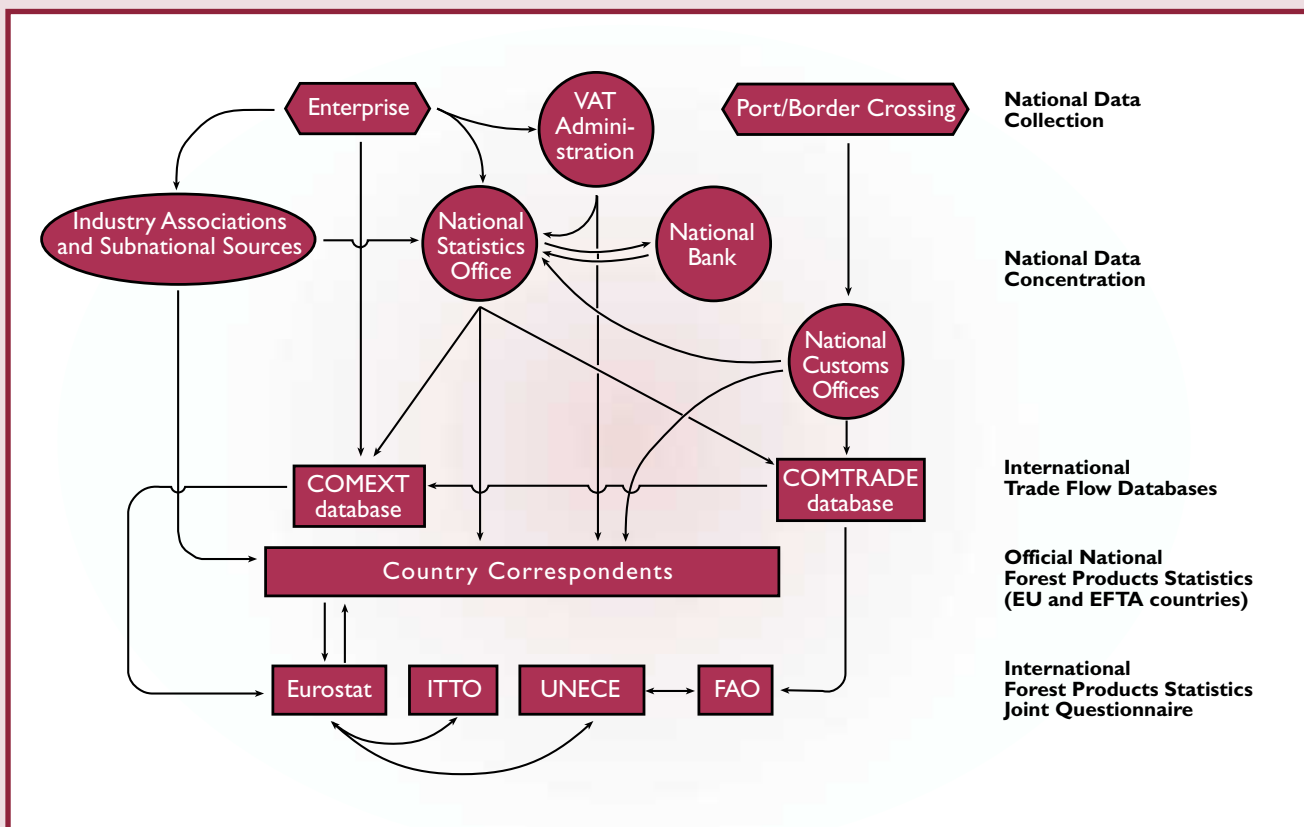
vice to users of statistics; and 2) collect and disseminate the statistics more efficiently, thus reducing the burden to secretariats and countries alike. The guiding principles are: 1) each country should be asked only once for their statistical data; 2) country correspondents should reply only to one organization; and 3) all organizations should be reporting the same numbers for the same statistic. In addition to the UNECE and FAO, the IWG core group includes the International Tropical Timber Organization (ITTO)¹¹ and Eurostat.¹² Eurostat is the statistics office of the European Commission for the European Union, and they have their own working party on forestry statistics. Other members of the IWG include the Organization for Economic Cooperation and Development (OECD), some Directorate Generals (DG) of the European Commission (specifically DG Enterprise, DG Agriculture, and DG Environment), and the European Environmental Agency.¹³

¶ AN EXAMPLE DEFINITION ¶

Sawnwood is defined by the UNECE and FAO as:

“Wood that has been produced from both domestic and imported roundwood, either by sawing lengthways or by a profile-chipping process and that, with a few exceptions, exceeds 5 mm in thickness. It includes planks, beams, joists, boards, rafters, scantlings, laths, boxboards, and ‘lumber’, etc., in the following forms: unplanned, planed, finger-jointed, etc. It excludes sleepers [railroad ties], wooden flooring, mouldings (sawnwood continuously shaped along any of its edges or faces, like tongued, grooved, rebated, V-jointed, beaded, moulded, rounded or the like) and sawnwood produced by resawing previously sawn pieces. It is reported in cubic meters solid volume.”

Of the members of the IWG, only the core members regularly collect and disseminate forest products and resource statistics. The outputs of the UNECE and FAO are the product of close coordination through the IWG, the WPFES, and the UNECE and FAO Timber Section. The Timber Section is also the secretariat for two intergovernmental bodies that collect, disseminate, and use statistics: the UNECE Timber Committee¹⁴ and the FAO European Forestry Commission.¹⁵ ITTO's statistics are published annually in the *Annual Review and Assessment of the World Timber Situation*.¹⁶ Eurostat publishes periodic *Forestry Statistics*.¹⁷ While many other organizations collect statistics for the forest and forest industries sector, this article is limited to



Forest Products Data Flows in the European Union.⁴⁰

statistics collected by UN organizations and their direct partners.

How are these data collected?

Statistics have traditionally been collected through official questionnaires sent from headquarters in Geneva and Rome to the member countries. In Geneva, we follow two channels of communication, a formal channel through designated heads of country delegations to the Timber Committee and European Forestry Commission, and an informal, but direct, channel to designated country statistical correspondents.¹⁸ FAO goes through an even more formal route by sending questionnaires through country ambassadors to the FAO in Rome.

To obtain the statistics, national statistics offices receive data from forest and forest products enterprises, customs agencies, tax administrations, banks, and industry associations. Our country correspondents, who often are in government or government-appointed agencies (e.g., the Forest Products Laboratory in the United States)

receive official information from their national statistical bureau. They collect additional information from many of the same sources as the national statistical office. Countries validate their statistics before sending them to us, and we also run checks for consistency.

In the past, the questionnaires were only on paper and exchanged through the mail. Nowadays they are both paper and electronic. We send out Microsoft Excel-based questionnaires via e-mail, and for some countries without e-mail, we send diskettes. We also have questionnaires on our website and correspondents are directed to the site¹⁹ via an e-mail notice.

We have a number of questionnaires, but the main questionnaire for forest products statistics is the Joint Forest Sector Questionnaire (JFSQ). The international organizations jointly created the JFSQ and associated nomenclature in 1999. The JFSQ has reduced the workload on countries and also reduced discrepancies in data that resulted from multiple questionnaires from individual organizations at different times during the reporting cycles.

From Geneva, the JFSQ is distributed in English, French, and Russian (our official languages) to the 55 countries within the UNECE region, less the 19

countries of the European Union and the European Free Trade Association (EFTA). Eurostat sends out the same JFSQ to their 19 countries in English and French. FAO distributes their questionnaires in English, French, Spanish, Chinese, and Arabic to the rest of the world. ITTO sends the JFSQ in English, French, and Spanish to their 29 producer countries (plus Japan), i.e., countries categorized as producing tropical timber (as opposed to members consuming tropical timber, e.g., the United States). The secretariats share the collected data and then publish it separately and use it in their analyses.

The trade flow statistics from the JFSQ form the basis of one annual issue of the *Timber Bulletin*: "Forest Products Trade Flow Data." The UN COMTRADE²⁰ database is used to check for consistency and fill gaps in missing information.

In Geneva, we also have other questionnaires. The Timber Committee Questionnaire (TCQ) is an annual forecasting questionnaire. Countries are asked in the autumn to forecast forest products markets for the current year and the forthcoming year. These forecasts form the basis of the annual Timber Committee market discussions held in Geneva in September. Results of the market discussions and the country-supplied forecasts are the basis of another issue of the UNECE and FAO *Timber Bulletin*: "Forest Products Markets in (current year) and Prospects for (coming year)".²¹

Some of the most heavily debated and elaborated questionnaires were the forest resources questionnaires. After extensive collaboration, Geneva sent out the Temperate and Boreal Forest Resources Assessment 2000 Enquiry. FAO sent out its Forest Resources Enquiry, also. These enquiries were a series of 25 tables with substantial definitions and instructions. The results of these enquiries were published in print and electronically as the UNECE and FAO *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (Industrialized temperate and boreal countries): UNECE/FAO Contribution to the Global Forest Resources Assessment 2000*.²² With the additional information on forest resources that FAO collected from the remaining countries, they published the *Global Forest Resources Assessment 2000: Main report*.²³

In the Timber Section, we also gather statistics on forest fires via a questionnaire and publish

these statistics in the "Forest Fire Statistics" issue of the *Timber Bulletin*²⁴ and analyze them in the *International Forest Fire News*.²⁵

When is a statistic not a statistic?

In order to produce analyses on the markets for certified forest products, i.e., those products originating from forests that have been certified to be sustainably managed, we need statistics on not only the certified products, but also the certified forests in our region. But statistics are not available, primarily because customs classifications do not distinguish between certified forest products and non-certified forest products. For example, a load of certified logs going onto a ship in Poland is recorded as roundwood, but not as certified, even if it comes from a certified source.

Due to the lack of statistics on certified products, the Timber Committee and European Forestry Commission established an informal network of officially nominated country correspondents to provide information on certified forest products markets and certified forests in their countries. The result of this new channel of information was a wealth of facts and opinions that we used to write the "Status of Forest Certification in

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the UNECE Region: Summer 2001,"²⁶ a *Geneva Timber and Forest Discussion Paper* and a chapter on "Markets for Certified Products"²⁷ in the *Forest Products Annual Market Review, 2000-2001*. The point is that the information going into these two

publications on certification was not mutually-agreed-upon, internationally recognized statistics, but rather the best information we could collect in its place.

FAO also issues a questionnaire on pulp and paper production capacity. Statistics from that enquiry are published in print and electronically in *Pulp and Paper Capacities*.²⁸

Improvement of collection and dissemination of statistics

Through the IWG, the WPFES, and meetings of country statistical correspondents, the UNECE and FAO are constantly improving the collection and dissemination of statistics. The division of labor has resulted in better coordination and the elimination

THE PRODUCTION OF AN ELECTRONIC QUESTIONNAIRE MODERNIZED THE PRINTED-PAPER QUESTIONNAIRE, BUT WE ARE NOW WORKING ON A FURTHER IMPROVEMENT: AN INTERACTIVE, WEB-BASED QUESTIONNAIRE.

of duplication of efforts. For example, over the last 2 years, the IWG has harmonized its data validation and estimation procedures, so that each of the four agencies applies:

- Common validation procedures to ensure internal consistency of totals, to check trade unit values, and to identify inexplicable year-to-year changes or other potential errors;
- Corrections made by the lead agency, in consultation with national correspondents, and then transmitted to other agencies;
- Common approaches to estimating missing data, or data that failed the above-mentioned validation tests;
- Findings from research funded by Eurostat and carried out by the European Forestry Institute²⁹ (EFI) into the methods used by countries to collect production and trade data and

transmit the information, and especially to evaluate discrepancies between different trade data sources (COMEXT³⁰, COMTRADE, and the JFSQ);

- An agreed timetable for the whole process with coordinated efforts between countries and agencies.

FAO in Rome has a project to upgrade the quality and presentation of statistical data via their website. The Agricultural Bulletin Board on Data Collection, Dissemination, and Quality of Statistics project (ABCDQ) was established in 2000 to guide users who might seek information on the sources and methods of national agricultural data collection and dissemination.³¹ The ABCDQ is an important reinforcing element to the quality of the FAOSTAT database. Quality is defined as: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, coherence and completeness, and sound meta information. Metadata in the FAO context covers data describing different quality aspects of statistical data, for example:

1. Content aspects that describe concepts, definitions, and classifications of variables (e.g., the notes next to items in FAOSTAT);
2. Accuracy and reliability aspects that analyze different kinds of errors associated with the estimates;
3. Availability aspects that describe which statistical data are available, where they are located, how they can be accessed, etc.;
4. Data collection aspects that describe how data were collected.

This last aspect is being addressed by ABCDQ. The ABCDQ is currently under development and the project is trying to stimulate country input as well as gather national metadata contributions in an organized and systematic way. It is hoped that by the positive response to this initiative, the data quality of FAOSTAT will be enhanced in a significant way.

From ink to bytes

The production of an electronic questionnaire modernized the printed-paper questionnaire, but we are now working on a further improvement: an interactive, web-based questionnaire. A fully functional web-based questionnaire would allow direct input of statistics into a database, screening initial submissions for errors, and then uploading data into an externally accessible database. This type of system has been initiated by the FAO for selected countries. The potential exists to provide countries direct control over their data that is supplied to the worldwide user community.

Validation of statistics

After the receipt of statistics from the countries, the data are validated by each responsible agency. Some potential errors are flagged through an automatic checking procedure as they are uploaded into the databases. Statistics submitted that fall outside of normal increases or decreases are discussed directly with the national correspondent submitting the information. If correct, these can be the basis of an important development to be documented in our analyses. If incorrect, the statistics are corrected as soon as possible. The agencies have a rigid system and timeline for sharing of data. The timing is usually driven by publication and meeting deadlines.

Workshops to improve statistics collection

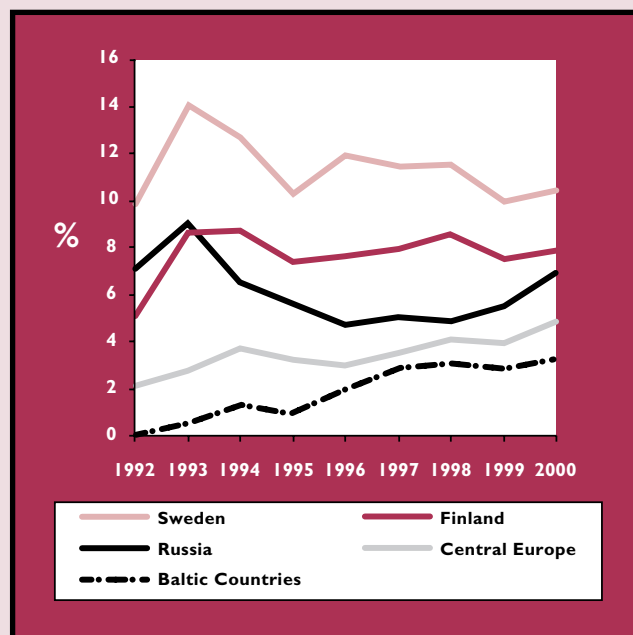
ITTO and FAO have held regional workshops to improve the collection of statistics from countries. Usually held in a member country, as opposed to our headquarters in Geneva, the workshops begin with a discussion of the national need to collect forest products production, consumption, trade, and forest resource statistics. Countries need this information for setting policies for the forest and forest industries sectors. Laws concerning trade regulations, standards, tariffs, taxes, labor, harvests, reforestation, and transportation are all based at some point on statistical information. Once countries realize the need for statistical collection for their domestic purposes, the next step is to harmonize those data with the data of international organizations in order to achieve comparable statistics. Finally, the workshops describe the JFSQ and the process of submitting accurate information on a timely basis.

What are the new and important trends in the data?

When the wall came down in 1989, the UNECE had 34 countries in its region. The break up of the USSR (from 1 to 15 countries), Yugoslavia (from 1 to 5), and Czechoslovakia (from 1 to 2) resulted in additional countries in the region. While interest in the economies and markets of these newly independent countries intensified, the availability of information declined. In many of the former centralized countries, the information infrastructure was good, but when they became independent, often the channels of information were broken. One of the first tasks was to build capacity within the countries for

reporting and gathering statistical information in the forest and forest industries sector. The next steps were to harmonize definitions and establish regular reporting on a timely basis.

The inconvenience of not having a long time series, or of having a long-standing time series come to an end, such as for the USSR, is more than outweighed by the new knowledge about independent countries. We, and our clients, have benefited tremendously by having current information about dynamic country markets, for example the Baltic countries of Estonia, Latvia, and Lithuania. The emergence of the central and eastern European countries is a frequent topic within our analyses. For



Sawn Softwood European Exports.⁴¹

example, the market shares of softwood lumber in Europe are changing rapidly, with growing capacities and trading infrastructures in central and eastern Europe.

We are always adding statistics for new products. Readers of the *Forest Products Journal* know that researchers are continually inventing new wood-based products. When those primary-processed products command a significant market share, we begin to collect statistics on them. For example, we never collected waferboard statistics, but when oriented strandboard became a common product in North America and later in Europe, we broke it out of the particleboard category and recorded statistics on its production, consumption, imports, and exports. We began our series to distinguish medium density fiberboard from other fiberboards in 1995.

Through the IWG and the WPFES, we are following any reclassifications by customs authorities and other bodies that could affect our statistical series. For example, when customs agents were unable to distinguish between sawlogs, pulpwood, and fuelwood, the Customs Cooperation Council (now also called the World Customs Organization) eliminated the distinction in the Harmonized System of trade classifications between these two roundwood assortments. Some 30 years of statistics came roaring to a halt and for most European countries we received only totals of roundwood broken down into *industrial wood in the rough*³² and *wood fuel*.³³

While true that small log machining has nearly eliminated the distinction between a small sawlog and a pulp log, for analysis purposes it is critical to know whether the wood coming out of the forest will be used for paper, or lumber, or fuel. Thus, ever since this declassification in 1992, the international organizations in conjunction with some member countries have sought to overturn the decision. Due to concerted effort by the international organizations, along with some member states, it now appears that the European Union, in its internal trade classification known as the Combined Nomenclature, is going to reinstate this distinction.

In addition, as mentioned previously, the IWG agrees upon definitions, and changes them, but only when truly necessary.

How are the statistics communicated back to users?

The UNECE and FAO in Geneva publish raw forest products statistics in print, on diskettes, and on the Timber Committee website. The main statistical publications are the *Timber Bulletin* issues:

- “Forest Products Statistics”
- “Forest Products Prices”
- “Forest Fire Statistics”
- “Forest Products Trade Flow Data”

The *Timber Bulletin* is a sales document available by paid subscription at \$150 per year. Individual copies are available at \$30 each through the UN.³⁴

We also have recently published the statistics on forest resources in *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (Industrialized temperate and boreal countries): UNECE/FAO Contribution to the Global Forest Resources Assessment 2000*. The printed publication is almost out-of-stock; however, it is available free on CD and statistics may be downloaded without charge from the website.

The UNECE Timber Committee website now includes a Market Information Service³⁵ (MIS) that groups all the different market-related information produced by the secretariat under one site. Specifically, the public can find information without charge under these main headings:

- Market reports
- Market statistics
- Market forecasts
- Certified forest products

The FAO in Rome publishes in print the *Yearbook of Forest Products*. The *Yearbook* contains annual data on the production and trade in forest products for the last 5 years, and on the direction of trade for the last 2 years. The *Yearbook* is multi-lingual: English, French, Arabic, Chinese, and Spanish. FAO-STAT produces a CD of all FAO statistics since 1961 and has an interactive forest products website that is updated periodically within the year with forest products statistics.³⁶ The site is available to the public for limited data searches, and is available by subscription for more extensive extractions. The CD sells for \$600 and an annual subscription to the FAOSTAT site is \$1,200.

The FAOSTAT forestry statistics website has individual sites for:

- Roundwood, sawnwood, and wood-based panels
- Pulp, paper, and paperboard (cardboard)
- Bilateral trade matrices

FAO in Rome also recently published the *Global Forest Resource Assessment 2000* with a wealth of statistical tables and their analyses.³⁷

Challenges in collecting international statistics

While not easy to achieve, the large international organizations and all partners realize the value in coordinating the collection, validation, and dissemination of statistics. Communication of updates and initiatives occurs periodically, especially through the annual meeting of the IWG. The IWG attempts to maintain communication among all its members, both core members and the other organizations, as well as other people affected by its decisions. As the duties of the IWG are supplemental to other tasks of its members, the communication job is an extra burden.

A major challenge is to collect statistics for our own analyses while at the same time serving our clients. The European Forest Institute (EFI),³⁸ headquartered in Joensuu, Finland, studied the needs of users of forest sector statistics and found that users want:

1. Comprehensive statistical coverage
2. Quality (accuracy and reliability)
3. Comparability between countries via conformity to standard classifications
4. Consistency over time and between different parameters
5. Topicality
6. Periodicity of collection and reporting of current information
7. User-friendliness and accessibility
8. Flexibility and adaptability
9. Cost/benefit

The EFI's study concluded that users of statistics are demanding new information, for example about environmental and social issues, and recommended that a detailed user survey be conducted. Other recommendations include: 1) more resources should be provided to not only collect quality information, but also to better disseminate that information in cooperation with other agencies; 2) the link between quality information and policy-making should be highlighted for decision makers, in part to gain higher priority and resources; 3) countries should establish bureaus to collect and disseminate all relevant information about their forest and forest industry sector and those countries with currently functioning bureaus should aid establishment of similar bureaus in those central and eastern European countries in transition to market economies.

Maintaining effective linkages to national correspondents is critical to the successful collection of data. However, even in the most well-structured countries, organizational and personnel changes often impact our collection of timely and complete information. For some developing countries, identification of a national correspondent can be problematic. In these same countries, development of the institutional infrastructures to collect, validate, and report statistics is also a necessary precursor to providing data to us. We work with these countries through workshops or by pairing them with other countries that have expertise. The Nordic-Baltic countries' statistical cooperation over the last 6 years is an example of an effective pairing of experienced countries and countries with a need to develop their forest products and forest resources statistical infrastructures.

The IWG also tries to share the workload between the various organizational members, not

all of which have equivalent workforces. For example, in the UNECE and FAO Timber Section, we have one statistician who has a variety of other duties in addition to the collection, validation, and distribution of forest products statistics from our 55-country region.

Estimation of missing statistics is one of our greatest challenges. Not all countries have statistical reporting systems in place like the United States. In order to produce comprehensive statistics with the important totals by region and product group, the FAO and UNECE are forced to include estimates. Our first choice is for the country correspondent to make the estimates, but when we must do it, we try to highlight that number in the publication to indicate that the statistic is a secretariat estimate. When available, data are drawn from secondary sources, for example trade journals. Sometimes trend estimates are used. The *FAO Yearbook of Forest Products*³⁹ attempts to have no missing statistics and its preface states, "Statistical information in the yearbook is based primarily on data provided to the FAO Forestry Department by the countries through questionnaires or official publications. In the absence of official data, FAO makes an estimate based on the best information available."

Whenever one organization makes an estimation of data, it is incumbent on that organization to inform the others so that users find consistent statistics, regardless of the source.

Enforcement of statistical reporting deadlines is also a constant challenge. In Geneva, we produce the *Forest Products Annual Market Review* at the earliest possible date, based specifically on the earliest moment that the majority of the countries within our region are able to report their statistics. We send out the JFSQ questionnaire in March, with a deadline of May, in order to update the TIMBER database for the *Review* analysis in June and preparation for printing in July. This tight time schedule is necessary if the Timber Committee's annual market discussions in September are to have the *Review* as a background document.

Within the UNECE region, we can anticipate that the majority of the countries, and especially the major producing and trading countries, will have their statistics available by the deadline. The newly independent countries, some with economies in transition to market economies, often have neither complete, nor up-to-date statistical information for

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the past year. Our goal is to assist these countries in developing their national information for their own uses, and in so doing to gain systematic reporting for our needs also.

Sometimes national laws prohibit reporting statistics. For example, in order to protect confidentiality, and to prevent disclosure of the production and shipments of a product with less than three plants in a country, some countries do not report some products. This is the case for certain pulp and paper grades in Finland, where the manufacturing plants have only a couple of corporate owners, and where the Finnish Forest Research Institute, which reports statistics to us, is prevented by law from reporting their volume statistics. They do, however, report the values of the imports and exports of these confidential grades. Sometimes in such cases, for our regional totals, we use this limited information to estimate the missing volumes, and thereby maintain a more reliable estimate for the European total.

We realize that many countries have more detailed forest and forest industry statistics than we collect. However, we continually assess whether the majority of countries would be able to report the same commodity statistic, and if not, we do not usually continue collecting or begin collecting that statistic. For example, in order to calculate "real" consumption in a country, we not only need to know their production, imports, and exports, but also the level of in-country inventory that has not been consumed. For many years, countries submitted stock levels periodically throughout the year in order to calculate true consumption, and to see the effects of changing stock levels, which can have an effect on prices. However, a few years ago, when only a handful of countries could supply accurate and timely data on inventory levels, we were forced to drop the collection of those data. As a result, we now calculate "apparent" consumption, as defined by production plus imports minus exports.

A few European Union member countries do not regularly and completely report their statistics. While we understand the reasons behind the lack of submission, we still need to make estimates and seek secondary sources for information about pro-

duction and trade. This is the case with Spain, where changing to a decentralized system of statistics collection from the 17 autonomous communities has complicated matters. The federal government depends exclusively on submission of statistics from the regional governments, which are often missing or late. As a result, we try to make estimates for missing data. At the same time, we work closely through Eurostat with the national statistical contact to identify secondary sources of information, for example trade associations.

Our problem of limited personnel to work on statistics collection, validation, and reporting, is resolved by relying upon countries to participate in our work. We are indebted to our key links to national data, i.e., the country statistical correspondents. Countries also loan experts to help us build temporary capacity for specific needs. For example, thanks to the availability of funds within the Timber Section, 2 years ago we converted the Lotus-based TIMBER database into a Microsoft Access-based system. The same situation occurs annually in the analysis of the statistics in the *Forest Products Annual Market Review*, i.e., we are dependent on loaned experts, for example from the USDA Forest Service, Forest Products Laboratory. We cannot

overstate the synergies created in the participatory approach between countries and the international organizations, and in the cooperation between organizations.

Acknowledging the challenges presented in the preceding paragraphs, we nevertheless believe that we are providing a valuable service for our clients. If we look back over the last decade, we can see that tremendous achievements have occurred in

both the collection and dissemination of international forest products and resource statistics. The spirit of the people working within the international organizations is positive and they realize that their work provides an important basis for our internal forest sector analyses, as well as those of our external clients. The improvement of collection, validation, and reporting is an ongoing process, one built into the organizations' mandates. The success of the process depends upon continued communication and commitment between agencies and with national correspondents.

WE CANNOT OVERSTATE THE SYNERGIES CREATED IN THE PARTICIPATORY APPROACH BETWEEN COUNTRIES AND THE INTERNATIONAL ORGANIZATIONS, AND IN THE COOPERATION BETWEEN ORGANIZATIONS.

The author is a Forestry Officer - Marketing, Timber Section, Trade Division, UNECE and FAO, Geneva, Switzerland. He wishes to express his sincere appreciation for the contributions of his reviewers, in alphabetical order: Alex McCusker, Statistician, UNECE and FAO Timber Section, Geneva; Tim Peck, Honorary Chairman of the Board, European Forest Institute, Joensuu, Finland (and former Director, UNECE and FAO Agriculture and Timber Division, Geneva); Kit Prins, Chief, UNECE and FAO Timber Section, Geneva; and Adrian Whiteman, Forestry Officer (Sector Studies), FAO, Rome. UN publications can be ordered by visiting www.un.org/Pubs/sales.htm. FAO publications can be ordered by visiting www.fao.org/icatalog/inter-e.htm.

End Notes

¹www.fao.org/forestry/fo/STRUCT/en/struct_e.html

²www.unece.org/oes/eceintro.htm

³www.unece.org/trade/timber/mis/reports.htm

⁴www.unece.org/trade/timber/mis/fp-stats.htm

⁵FAO Working Paper, Number 59, 2002.

⁶www.unece.org/trade/timber/efsos/welcome.htm

⁷www.fao.org/forestry/FO/SOFO/sofo-e.stm

⁸ABARE Research Report 99.9, ABARE, Canberra, Australia.

⁹www.fao.org/forestry/fo/country/nav_world.jsp

¹⁰Paraphrased from *Unasylva*, Vol. 1, article on the first FAO statistical conferences in 1947. www.fao.org/docrep/x5339E/x5339E00.htm

¹¹www.itto.or.jp

¹²europa.eu.int/comm/eurostat

¹³www.eea.eu.int

¹⁴www.unece.org/trade/timber

¹⁵www.fao.org/forestry/fo/statbod/regional/efc/efc-e.stm

¹⁶www.itto.or.jp/inside/review2000/index.html

¹⁷europa.eu.int/comm/eurostat/Public/datashop/printcatalogue/EN?catalogue=Eurostat&product=FOREST-EN

¹⁸Country-nominated statistical correspondents are a valuable source of information for their specific countries. A list of correspondents is published in "Forest Products Statistics," issue 2 of the UNECE and FAO *Timber Bulletin*.

¹⁹www.unece.org/trade/timber/mis/jfsq2001/

²⁰COMTRADE is the UN database of international trade of all commodities. It is maintained by the UN Statistical Division (www.un.org/depts/unsd/), but is not available currently via their website.

²¹www.unece.org/trade/timber/mis/forecasts.htm (statistics part of this *Timber Bulletin*); www.unece.org/press/pr2001/01tim03e.htm (market statement part of this

Timber Bulletin).

²²www.unece.org/trade/timber/fra/welcome.htm

²³www.fao.org/forestry/fo/fra/main/index.jsp

²⁴www.unece.org/trade/timber/ff-stats.htm

²⁵[www.ruf.uni-freiburg.de/fireglobe/#International Forest Fire News](http://www.ruf.uni-freiburg.de/fireglobe/#InternationalForestFireNews)

²⁶www.unece.org/trade/timber/docs/certification/cert.htm

²⁷www.unece.org/trade/timber/docs/rev-01/chap-10.pdf

²⁸www.fao.org/forestry/FOP/FOPW/paper/Public-e.stm

²⁹www.efi.fi/

³⁰COMEXT is the database produced annually by Eurostat for statistics on the European Union's external trade and trade between Member States of the European Union; europa.eu.int/comm/eurostat/Public/datashop/printcatalogue/EN?catalogue=Eurostat&collection=09-Database%20Information

³¹apps3.fao.org/abcdQ/

³²All roundwood except wood fuel. It is an aggregate comprising sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. It is reported in cubic meters solid volume underbark (i.e., excluding bark). The customs classification systems used by most countries do not allow the division of Industrial Roundwood *trade* statistics into the different end-use categories that have long been recognized in *production* statistics (i.e., saw and veneer logs, pulpwood and other industrial roundwood). It excludes telephone poles.

³³Roundwood that will be used as fuel for purposes such as cooking, heating, or power production. It includes wood harvested from main stems, branches, and other parts of trees (where these are harvested for fuel) and wood that will be used for charcoal production (e.g., in pit kilns and portable ovens). The volume of roundwood used in charcoal production is estimated by using a factor of 6.0 to convert from the weight (metric tons) of charcoal produced to the solid volume (m³) of roundwood used in production. It also includes wood chips to be used for fuel that are made directly (i.e., in the forest) from roundwood. It excludes wood charcoal. It is reported in cubic meters solid volume underbark (i.e., excluding bark).

³⁴publications@un.org

³⁵www.unece.org/trade/timber/mis/mis.htm

³⁶apps.fao.org/page/collections?subset=forestry

³⁷www.fao.org/forestry/fo/fra/index_tables.jsp

³⁸Peck, T.J. The International Collection and Dissemination of Forest Sector Information in Europe. European Forest Institute Working Paper 8, Joensuu, Finland, 1996, 25 pages. ISSN 1237-5136 and ISBN 952-9844-19-0.

³⁹FAO Yearbook of Forest Products, 1996-2000. 2002. FAO Forestry Series No. 35, FAO Statistics Series No. 158. Food and Agriculture Organization of the United Nations, Rome, Italy. ISBN 92-5-004669-3. ISSN 1020-458X.

⁴⁰Wardle, P., J. Van Brusselen, B. Michie, and A. Schuck. 2001. Improvement of Statistical Information System for Forest Products Production and Trade Statistics of EU and EFTA. Internal Report for Eurostat, Luxembourg. Contract No. 2000681100001. European Forest Institute, Joensuu, Finland.

⁴¹Forest Products Annual Market Review, 2000-2001. UNECE and FAO *Timber Bulletin*, Vol. LIV (2001), No. 3, p. 62. Based on UNECE/FAO Timber Database, 2001.