

Markets for Forest Products in Europe in the Face of Integration and Globalisation

Philip Wardle and Bruce Michie

**European Forest Institute
Discussion Paper 3**



European Forest Institute

ISBN: 952-9844-57-3
ISSN: 1455-6936

Markets for Forest Products in Europe in the Face of Integration and Globalisation

Authors: Philip Wardle and Bruce Michie

Publisher: European Forest Institute
Torikatu 34
FIN-80100 Joensuu
Finland

Editor -in-Chief: Ian Hunter

Tel: +358-13-252 020
Fax: +358-13-124 393
Email: publications@efi.fi
WWW: <http://efi.fi>

The views expressed are those of the authors and do not necessarily represent those of the European Forest Institute.

Authors' contact information

Bruce Michie
European Forest Institute
Torikatu 34
FIN-80100 Joensuu
Finland

Philip A. Wardle
3 Charles Hill Cottages
Elstead, Godalming
Surrey, GU8 6LE
United Kingdom

TABLE OF CONTENTS

Foreword	5
----------------	---

Part I: Preliminary Results of a Pilot Statistical Investigation of Trade

Introduction	9
Objectives	9
Methodology	9
Period of the Analysis	9
Integration and its Changes	10
A Factual Picture of the Forest Sector in Main Groupings	10
Analysis of Impact of Integration or Globalisation	11
Preliminary Results	13
Trade and Trade Flows	13
Trade Flows – Main Regions	15
Integration and Globalisation	18
A Preliminary Conclusion	22

Part II: Markets for Forest Products in Europe in the Face of Integration and Globalisation

A Proposal for Collaborative Research	25
Introduction	25
The Project Idea	25
Objectives	25
Methodology	25
Output	26
Proposals for Collaborative Research	26
Project Timetable	27
Discussion	27



FOREWORD

The evolution of integration of European and related countries in regional economic organisations such as the European Union, EFTA, COMECON and NAFTA over the past few decades leads to the questions whether membership of these organisations, or accession or departure of a country from membership affects activity of involved countries' forest sector. The sector policy makers and decision makers need to know how changes impinge on the sector's evolution. The aim of this study is i) to identify changes in forest sector activity – production, trade, industry investment and employment and ii) to test hypotheses that the developments are significantly affected by integration in membership of specific regional organisations, or that they would be expected as a result of general economic change and globalisation. On the basis of its findings the study would draw conclusions on the likely significance for the sector of future integration and globalisation.

EFI has introduced this project into its priority programme on Forest Products Markets and Socio-economics, with a preliminary feasibility phase and pilot study which will

- carry out a pilot statistical investigation of trade and production;
- explore the interest in collaboration in the research of European research institutes and to contribute to a full study;
- develop a full project proposal for implementation.

The aim in this discussion paper is first to present preliminary results of a pilot statistical investigation of trade and secondly to introduce the project idea and possible form of the full study as a basis for the development of the contributions of collaborating institutes.

PART I

**PRELIMINARY RESULTS OF
A PILOT STATISTICAL INVESTIGATION OF TRADE**



INTRODUCTION

In this discussion paper we are presenting the results of a quick first pass over the data on trade with the purpose of a preliminary reconnaissance to look for signs of the impact of integration or globalisation. To begin with, the aims and methods are summarised, then some preliminary results are presented and finally some conclusions are drawn from the reconnaissance.

OBJECTIVES

The objectives are: (a) to get a factual picture of the forest sector in the various groupings in Europe and how it has evolved with the changing membership in respect of trade and trade flows, and (b) through analysis of these data, to identify the impact of integration or globalisation.

METHODOLOGY

The trade study will involve comparative statistical analysis trade and trade flow development over time. The data used will be: (a) the EFI, UNSTAT based standardised forest product trade flow statistical database and (b) UN ECE/FAO statistics. A comparative model will be developed to test the significance of the hypothesis that there is a relationship between the development of trade and trade flows and membership or change in membership of a regional group resulting in different development than in the absence of any grouping. The Alternative hypothesis, that the development of trade and trade flows is related to global developments, is similarly explored.

PERIOD OF THE ANALYSIS

In this pilot statistical investigation, the period for the analysis is 1983-96, years for which trade and trade flow data in standardised form are available.

INTEGRATION AND ITS CHANGES

Regional groupings and changes in grouping that will be examined are the following:

Development of the EU

- March 1957 Treaty of Rome – Belgium, Luxembourg, France, Germany, Italy, Netherlands
- January 1973 – UK, Ireland, Denmark
- January 1981 – Greece
- January 1986 – Portugal and Spain
- 1990 – Reunification of Germany
- 1995 – Austria, Sweden, Finland
- possible future accessions – Cyprus, Estonia, Slovenia, the Czech Republic, Poland and Hungary.

COMECON 1983-1990

- USSR and countries of former USSR
- Bulgaria, Czechoslovakia, Hungary, Poland, Romania, Germany DR

Post 1990

- NAFTA – Canada, USA, Mexico
- Russia and the Commonwealth of Independent States
- Baltic States – Estonia, Latvia, Lithuania
- Czech Republic, Slovakia

A FACTUAL PICTURE OF THE FOREST SECTOR IN MAIN GROUPINGS

The first objective is to establish main features of the development of trade and trade flows in major groupings. The pilot investigation looks at these development over time in three/ four regional groupings, namely:

1. COMECON examining a subdivision between
 - USSR and countries of the area of former USSR
 - Bulgaria, Czechoslovakia (Czech Republic & Slovakia), Hungary, Poland, Romania
2. European Union 15
3. NAFTA

(Note that in working with these groupings it was necessary to correct for the reunification of the former German Democratic Republic with Germany in 1990)

It looks at the following characteristics:

1. Total trade (In current and deflated 1990 US\$ value)
2. Direction of total trade subdivided between:
 - trade with other countries within the group
 - trade with other named groups (COMECON, EU 15, NAFTA)
 - trade with the rest of the world

ANALYSIS OF IMPACT OF INTEGRATION OR GLOBALISATION

The second objective is to look at the hypothesis that there is a relationship between the development of trade and trade flows and membership or change in membership of a regional group. This will be tested by the analysis of the correlation of changes in development of the characteristics over time with changes in membership. This analysis will be carried out at the group level and at the level of individual countries

TRADE AND TRADE FLOWS

This study has used the standardised world forest products trade flow data base prepared from United Nations – UNSTAT COMTRADE data currently providing data for the years 1983-1996 (Michie & Wardle 1998). As the 1996 data are preliminary the main focus should be on the period up to 1995.

Table 1. Total Forest Product imports and exports – current US\$ billion

Region	Exports			Imports		
	1983	1990	1995	1983	1990	1995
Fmr USSR	1.4	3.3	4.7	0.6	0.7	0.4
Fmr COMECON Eur	0.8	1.2	3.0	0.3	0.9	2.4
EU 15	18.4	46.1	62.5	22.3	56.1	67.5
North American FTA	16.7	32.4	48.3	10.3	18.3	28.3
Rest of World	15.0	31.7	43.0	14.4	28.8	55.2
World Total	52.4	114.6	161.4	47.9	104.8	153.8

World trade in forest products has grown rapidly over the period from 1983 with current growth around 11 percent (Figure 1-C, D) while real growth measured in constant 1990 prices averaged 6 percent per annum (Figure 1-A, B). There are significant variations in the growth of total trade over the period. Thus total imports and exports were static at around \$50 billion from 1983-85 and then grew rapidly to a peak just above \$100 billion in 1990. They were then static until 1993 followed by another burst of growth to a new peak just above \$150 billion in 1995. Figures 1-E, F, G and H give more detail on small trading regions and regional trade on a percentage basis, respectively.

The composition is dominated by the European Union 15 countries which account for a proportion fluctuating around 40 percent of world imports and exports. The region is a net importer. The countries of the North American Free Trade Area account for just over 20 percent of imports and 35 percent of world exports (falling slightly in percentage in recent years). That region is a substantial net exporter. The former COMECON countries apparently account for 4-5 percent of world trade the higher figure applying to the most recent years. Both the European COMECON area and former USSR areas are net exporters (Figure 1E-H).

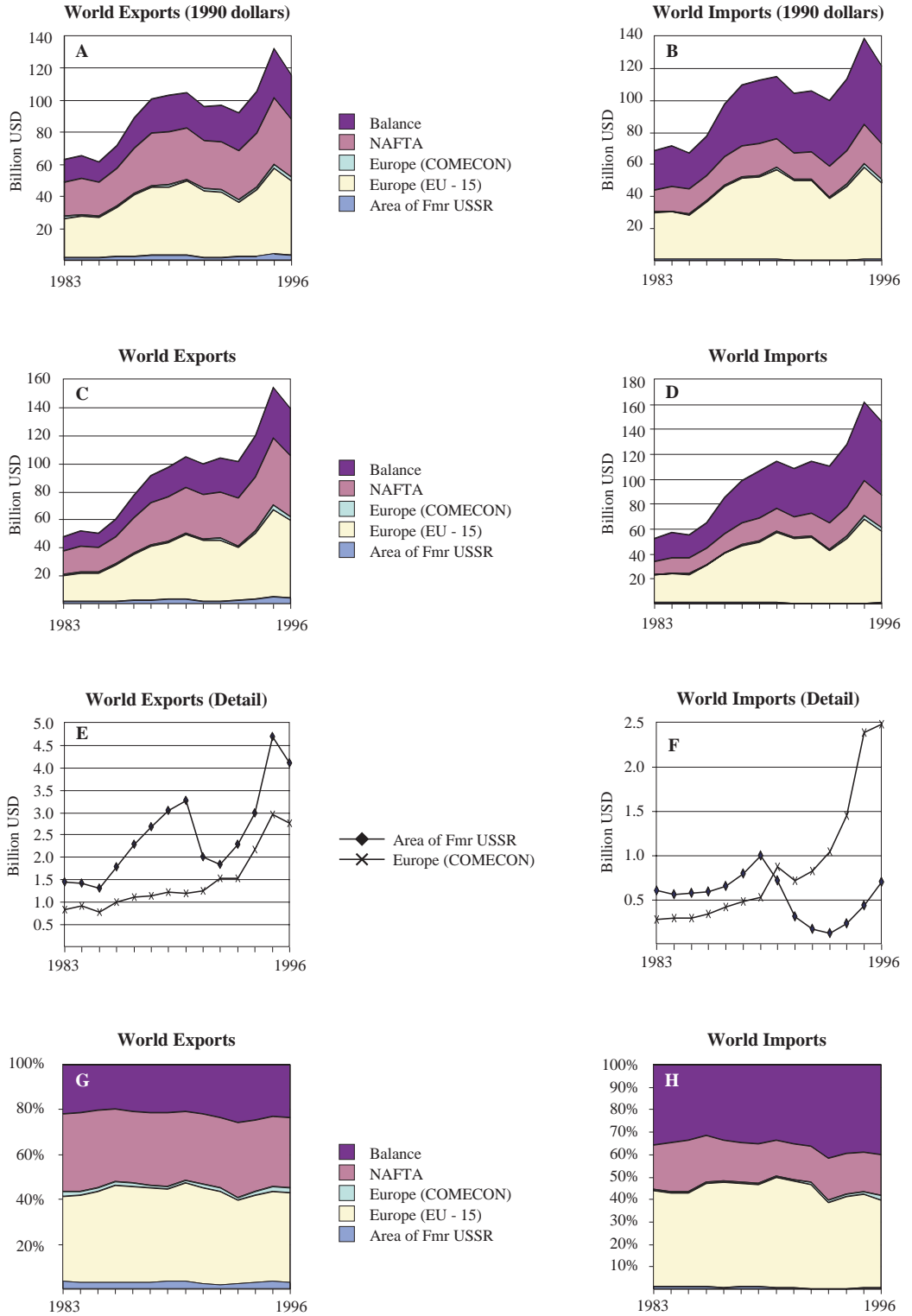


Figure 1. World Trade (constant and current prices) by region

Note: The word “*apparently*” is used because their trade in the earlier years is certainly underestimated, as before 1990 there is no record in the UN data of trade between the former USSR and other COMECON countries and no record of trade between the countries of the area of the former USSR.

The rest of the world – excluding the above four regions accounts for around 25 percent of exports and 33 percent of world imports.

The performance of the individual regions is somewhat diverse. The exports of all regions show a broad trend parallel to the aggregate trend to, more or less, a threefold increase between 1983 and the peak in 1995. However, the EU15 showed a decline of 20 percent in 1993 followed by rapid recovery; NAFTA followed the world trend. Exports of the area of the former USSR suffered a severe collapse of nearly 50 percent in 1991/2 and then recovered strongly to peak in 1995 topping 1990 by 50 percent. The exports of the other European COMECON countries increased fivefold over the period. (Figures A-G)

The imports of Europe and NAFTA closely parallel the exports and in both cases are dominated by the trade internal to the region. The imports of the area of the former USSR collapsed to 13 percent of their peak value in 1989 by 1993, but had recovered to 44 percent of the 1989 level by 1995 and to 70 percent by 1996. The imports of the other European COMECON countries increased astronomically to nearly ten times the 1983 level and more than four times that of 1990 by 1995. (Figures 2B-H)

TRADE FLOWS – MAIN REGIONS

European Union 15

Imports of the EU 15 from other countries within the region accounted for some 70 percent of the total, those from NAFTA 15 falling to 10 or 12 percent; those from the former COMECON recently rising to 3 percent; while the rest of the world contributed 15 percent. (Figure 3D)

Exports were to a similar extent principally to countries within the region. Exports to NAFTA ran at less than 4 percent. Exports to the other European COMECON countries have increased in recent years to approaching 3 percent. The balance of exports to the rest of the world ran at a fairly steady 20 percent. (Figure 3C)

NAFTA

Internal trade accounted for just over 80 percent of the regions imports, EU15 supplied some 8 percent increasing slightly in later years, while the rest of the world supplied 10 percent or a little less. (Figure 3H)

At the beginning of the period 50 percent of exports were consumed within the region declining in later years, sometimes to as low a level as 40 percent. Exports to EU15 fluctuated between about 15 and 20 percent being higher in the middle of the period. Exports to the rest of the world tended to increase from 30 to 40 percent over the period. (Figure 3G)

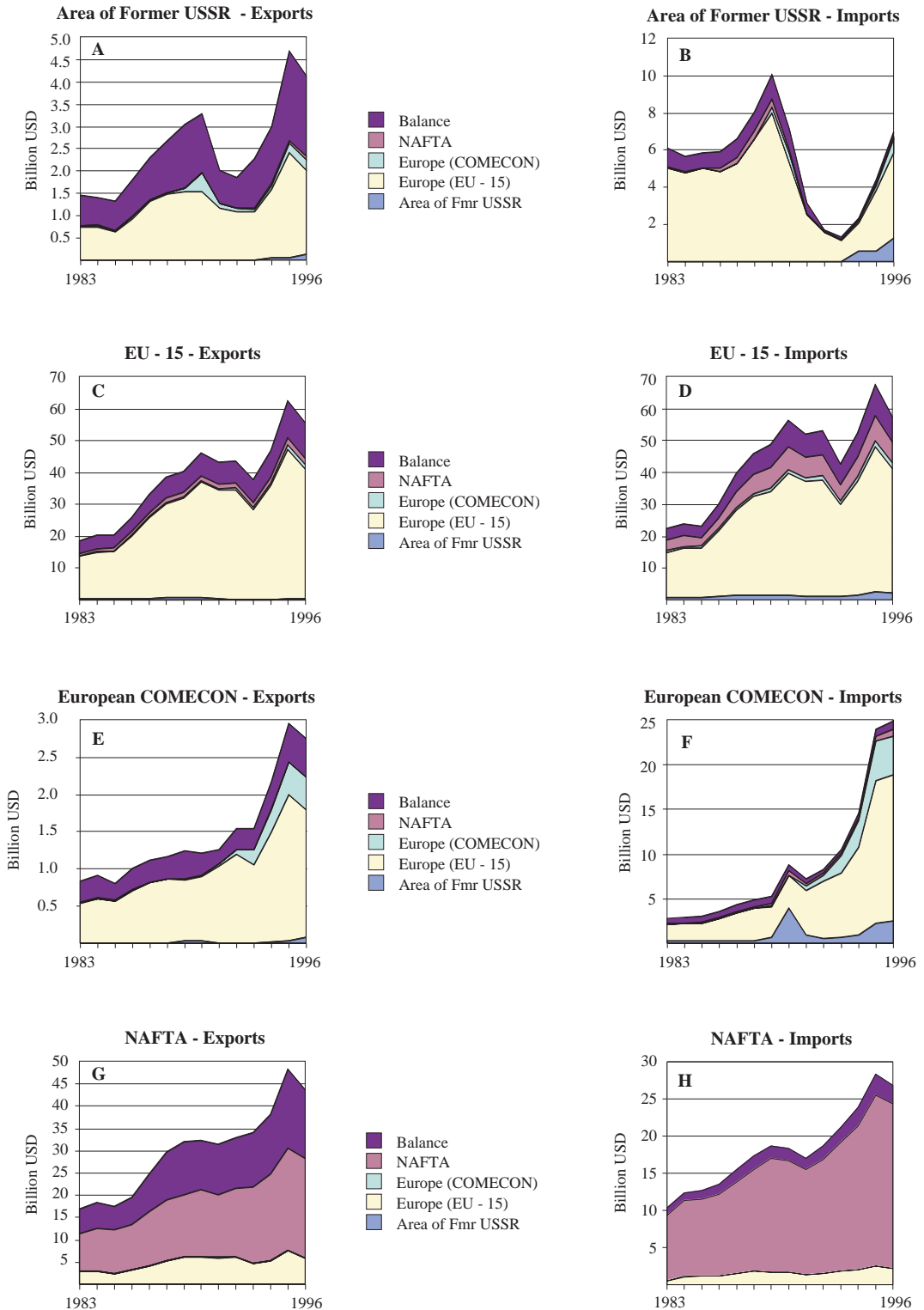


Figure 2. Regional Trade (current prices)

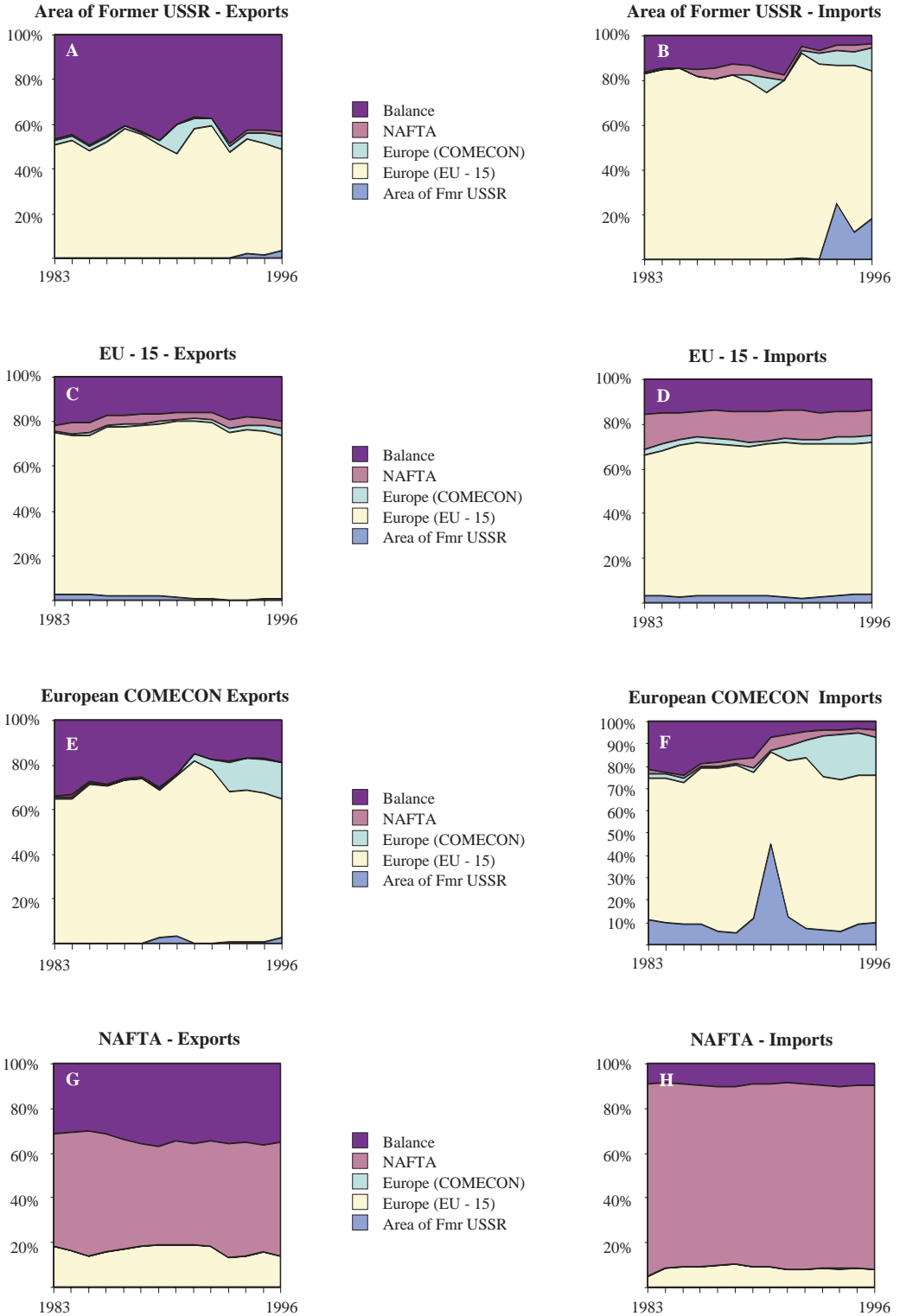


Figure 3. Regional Trade (percent)

Area of former USSR

Up to 1990 over 80 percent of reported imports were from EU15; the rest of the world contributed 15 percent together with a small proportion coming from NAFTA. As with exports, after 1993 significant trade with other former COMECON countries emerged amounting to over 20 percent of the total. (Figure 3B)

Reported exports fluctuated around 50 percent to each of the EU15 and the rest of the world. After 1992 trade with countries within the region and the other former European COMECON countries emerged and increased to 8 percent by the end of the period (Figure 3A).

Former European COMECON

Up to 1989 some 70 percent of the very small recorded import came from EU15; under 10 declining to 6 percent was recorded as coming from the area of the former USSR. Since 1990 the latter has increased to 10 percent of a vastly increased total import. Internal trade in the region has also increased from a nominal level to 20 percent (Figure 3F).

Exports to EU15 dominated the small but increasing trade up to 1990, taking around 85 percent. By 1995 the EU15 percent was reduced to 65 and an internal trade emerged. This latterly accounted for 18 percent and became greater than the rest of the world component (Figure 3E).

INTEGRATION AND GLOBALISATION

On the basis of this very preliminary review of trade and trade flow patterns we are able to make qualitative observations about changes in these areas and their relationship to integration and globalisation.

The major changes in regional grouping during the period 1983-96 were the accession of Spain and Portugal and later of Austria, Finland and Sweden to the EU; the formation of NAFTA and the cessation of COMECON and the separation of the countries of the area of the former USSR. We consider below each of the four regions from the point of view of these changes and possible effects of integration or globalisation.

European Union 15

The broad development of forest products trade in the EU15 followed the economic trends of the rich economies and the rapid expansion of total trade at the end of the period, but it also reflected the particular economic development of the EU countries and the recession around 1993. Thus the general development is dominated by the performance of economies.

The composition of trade according to trading partners shows that the proportion of imports originating from EU15 member countries increased over the period. This inter-trade was growing faster than total trade. The same was true for exports going to EU15 member countries up to 1990 when the inter-trade reverted to the 1983 level, reflecting increases in exports to countries of the former European COMECON countries and the rest of the world.

The development of trade of the two groups that joined the European Union during the period – Portugal and Spain and Austria, Finland and Sweden – corresponds closely with the pattern of development of EU15 trade. (Figures 4 and 5)

Exports to EU 15 from Portugal and Spain constituted increased from 75 to 84 percent but fell back to around 80 percent of their total exports over the period. The composition of imports of Portugal and Spain showed an increase from 58 to 72 percent originating in EU15.

The proportion of exports of the Austria, Finland, Sweden group to EU15 increased from 67 percent to a peak of 78 falling back to 73 percent which also increased slightly. The proportion of imports from EU15 increased from 54 to 60 percent with some fluctuation.

The development of forest product trade of the region follows general economic trends but has a distinct pattern of development within this which is closely reflected in the development of the two sub-regions. The evolution of the composition of trade shows a trend to increasing role of internal trade. The role of trade within the region increased for the two sub-regions whose association with the region became closer during the period. These features are consistent with the effects of integration being distinguishable from global effects.

NAFTA

The broad development of the region's forest products trade follows general economic trends. Its exports were 50 percent internal trade and 30 to 35 percent trade with the rest of the world. Exports to EU15 were around 18 percent up to 1992 but dropped to 14 percent in the latter years of the period. It would be difficult to ascribe such a change, which were similar in magnitude to fluctuations in earlier years, to any particular structural change in the country groupings although it coincided with the formation of NAFTA. The proportion of imports originating in the region were around 80 percent and there was very little variation in the imports from EU15 and the rest of the world, which each account for around 10 percent. Thus there was no apparent impact of change in integration on trade of this region.

Area of former USSR

The development of forest product trade was dominated by the economic changes that took place at the time of the break up of the former USSR in 1990. The UN records only provide coverage of trade external to the COMECON region prior to 1990. Exports collapsed to 60 percent of the 1990 peak. They have since recovered and grown to a level 50 percent above 1990. The latter include small exports to former COMECON countries. The main trading partners were the EU15 and the rest of the world, their shares fluctuating around 50 percent each. The collapse of imports in 1990 to 13 percent was even more dramatic and the recovery much slower than for exports. The reported share was dominated by trade from the EU15 but former COMECON countries have emerged as significant partners in the recovery period.

The changes in the magnitude of exports and imports were directly related to the economic change associated with the change to independent countries out of the former

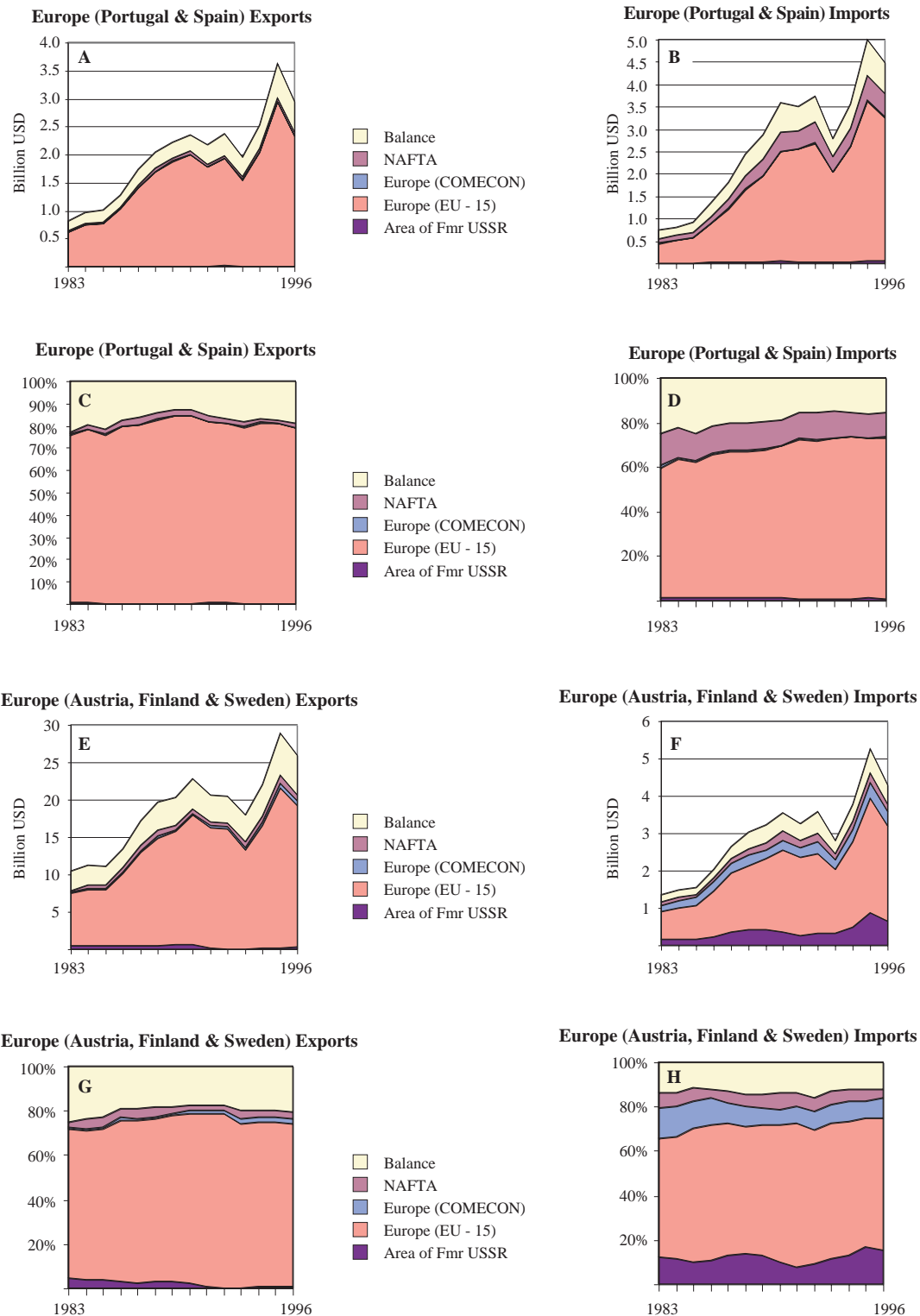
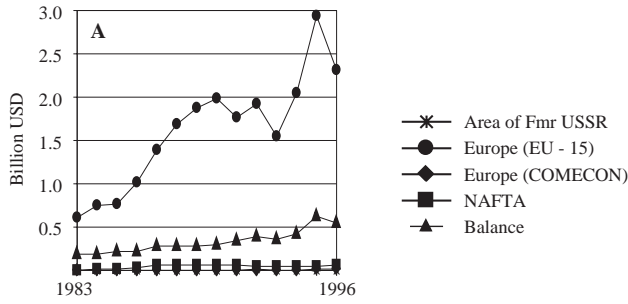
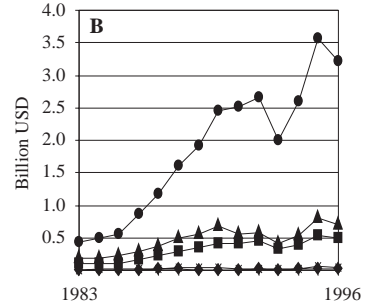


Figure 4. Trade Within European Union

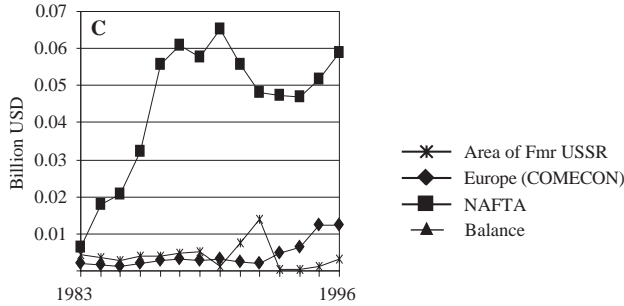
Europe (Portugal & Spain) Exports



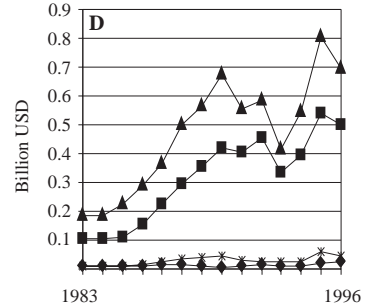
Europe (Portugal & Spain) Imports



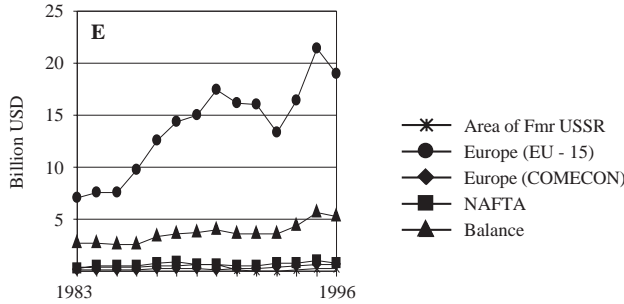
Europe (Portugal & Spain) Exports



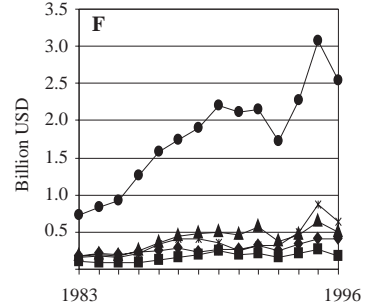
Europe (Portugal & Spain) Imports



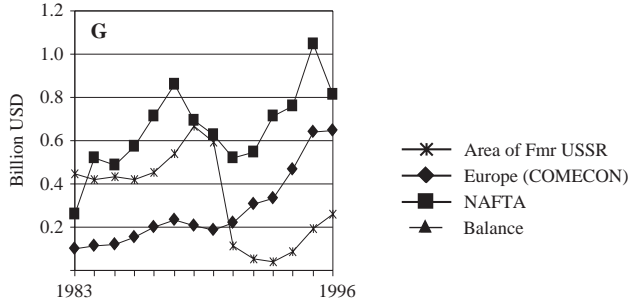
Europe (Austria, Finland & Sweden) Exports



Europe (Austria, Finland & Sweden) Imports



Europe (Austria, Finland & Sweden) Exports



Europe (Austria, Finland & Sweden) Imports

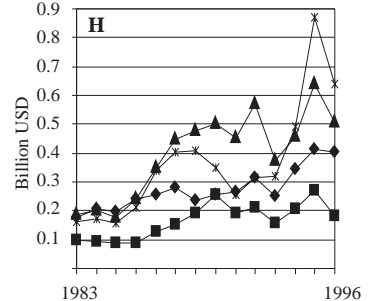


Figure 5. Trade Within European Union (detail)

USSR. An important component of trade – the inter-trade between the former members of COMECON – cannot be assessed from UN data. It was certainly substantial and was practically shut down with the cessation of COMECON.

Former European COMECON

This region's recorded trade in forest products grew steadily in the period 1983-90. From 1993 both exports and imports have expanded dramatically. The predominant partner in recorded trade has been the EU15 throughout but since former members of COMECON and Particularly European ones have emerged as significant partners. There was certainly substantial trade with both these groups before 1990. The changed economic and trading environment with the ending of COMECON has apparently had a dramatic effect on the forest products trade of the countries of this region.

A PRELIMINARY CONCLUSION

This limited analysis of total forest products trade indicates that the development of that trade is strongly related to general economic developments beyond any regional groupings, that its development in detail is definitely related to the specific economic trends of the region and that certain development trends are directly associated with membership and change in membership of regional groupings.

Decision makers need to know how changes impinge on the sector's evolution. The detection of an indication that the sector is significantly affected by integration or globalisation may wet their appetites, but they will become really interested only when they learn how those changes may impinge on their particular production, trade, investment and employment. The aggregated view of trade presented in this paper is an incomplete element in the complex of information required. The project idea, which is presented below, suggests how this complex of information may be developed through a collaborative research programme.

PART II

MARKETS FOR FOREST PRODUCTS IN EUROPE IN THE FACE OF INTEGRATION AND GLOBALISATION



A PROPOSAL FOR COLLABORATIVE RESEARCH

INTRODUCTION

The aim of this part is to introduce the project idea and possible form of the full study as a basis for the development of the contributions of collaborating institutes.

THE PROJECT IDEA

Objectives

The overall objective of the project is to identify the nature of the impact on development of markets for forest products and performance of the forest sector in Europe, of integration in trade or economic grouping of countries and of changes in the grouping and to ascertain whether these effects are significantly distinct from the effects of globalisation. This is with a view to estimating consequences for the sector's future. Detailed steps towards this objective are:

- to get a factual picture of the forest sector in the various groupings in Europe and how it has evolved with the changing membership in respect of production, trade and trade flows; industry structure, capacity and investment; and employment;
- to find out as far as possible the tangible impact of these groupings and changes in them, through quantitative analysis;
- to get a richer picture of the changes to the forest sector, based on the experience and perception of forestry and forest industry experts from countries within and outside the groupings;
- to assess the general impact of globalisation on the forest sector and to determine the extent to which changes in the sector are explained by general economic trends; and
- to draw conclusions on the likely significance of future integration and globalisation.

Methodology

Main theories to be applied

- Micro-economic theory of the firm, macro economic theory

Main hypothesis to be tested

- That integration of countries in trade and economic regional groupings has a significant impact on development of markets for forest products and performance of the forest sector in Europe distinct from the impact of globalisation.

Methods used for testing the hypothesis

- Econometric analysis
- Case studies
- Mobilisation of expert opinion

Improvements in relation to previous studies in the field

- Specific examination of the relationship of development of markets for forest products and performance of the forest sector to integration of countries in trade or economic grouping and to changes in the grouping.
- Application of the newly developed capacity in EFI in analysis of trade and trade flows.

Which data to use and how to collect the data

- The factual picture will be built on the basis of available international data bases such as FAO, ECE, UNSTAT augmented by national data
- Trade analysis will be based on UNSO, FAO and ECE forest products trade data and the standardised trade flow data base developed by EFI again augmented by national data.
- Analysis of industry structure, capacity and investment and employment will make use of international data sources, but will depend mainly on data available or collected at national level in specific national case studies.

Output

Reports

- The forest sector and the evolution of integration in Europe.
- Forest products trade, trade flows and the impact of integration in Europe.
- Case studies on trade; industry structure, capacity and investment; and employment.
- The impact of globalisation on the forest sector.
- Study conclusions

Seminar

- Integration and globalisation and the European forest sector.

PROPOSALS FOR COLLABORATIVE RESEARCH

The outline provides a basis for consultation with European forest research institutes to establish specific proposals for collaborative research. The aim of that consultation is i) to identify the institutes that will participate in the study; ii) to select the broad subject areas to be tackled by the institute, namely from production, trade and trade flows; industry

structure, capacity and investment; and employment; and iii) to develop a research plan for the institutes contribution to the study.

Identify the participating institutes

- The aim is to have some ten institutes across the membership of EFI spread across the regions as the main collaborators. The main conditions for participation include interest and competence in a study subject area, willingness to establish a project within the institute to implement its contribution and as far as possible to staff and finance that project from own resources.

Select broad subject areas

- It is expected that a collaborating institute will probably select one of the broad subject areas:
 - a) production, trade and trade flows;
 - b) industry structure, capacity and investment;
 - c) employment;

Within the selected area the institute will decide on specific relevant topics for its research.

Research plan

- The institute's research plan for its contribution to the study will be a component of the EFI project and, while quite brief, it will have the following format: Title, rationale, objective, methodology, inputs – staff, equipment, costs – output, and timetable.

Project timetable

The projected timetable for the EFI project, within which collaborating institute contributions would fit, is as follows:

- August 1998: Pilot statistical investigation of trade and production. Preliminary reports.
- June-December 1998: Identification of interested collaborating institutions and development of detailed specification of their activities and Identification of main funding. Submission of proposal on full project to EFI Scientific Advisory Board
- May 1999 to April 2000: work by collaborating institutions and EFI. Reports on sub-tasks by May 2000. Collaborating institutions
- October/November 2000: Seminar of one week duration.
- December 2000: Final report

DISCUSSION

An important part of this consultation is the consideration of the precise scope of the full EFI project, its main objectives and the methodology. New ideas which emerge in the

discussion of collaborating institute contributions will serve to improve the design of the full project. While the main collaborators will be few in number, there will certainly be a role for other institutes and individual researchers in contributing to the overall research effort, either taking on specified research or through voluntary contribution. A particular window for the latter is provided for through the opening for expert contributions and the seminar.