COMMISSION OF THE EUROPEAN COMMUNITIES

SEC(74) 1215 Final

Brussels, 28 March 1974

Communication to the Council on the problems of the pulp, paper and paperboard industry

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This Communication meets the Commission's undertaking to submit guidelines for this sector to the Council by 1 April 1974.

1. Analysis of the situation

As the appended analytical study shows, 42% of the Community paper and paperboard consumption is at present supplied by production in the Community from indigenous raw materials and 58% by production from raw, semi-manufactured and finished materials imported from non-member countries. Internal supplies consist of 18% of products made from wood and other plant fibres and 24% of products made by recycling waste paper. The distribution of imported materials among the various stages of the manufacturing process is: 3% wood, 29% wood pulp; 1% waste paper and 25% paper and paperboard. Dependence on imports is therefore relatively high both for pulp and for finished products.

The essential features of development in this sector are:

(i) a constantly rising demand;
(ii) a probable relative world shortage of pulpwood in the eighties;
(iii) the understandable wish of countries supplying wood pulp to the Community to increase its value by processing it themselves.

Compared with its Scandinavian and North American competitors, the Community industry suffers a number of weaknesses, namely, a shortage of home-produced raw materials, the inefficient use made of these, unit capacities in the pulp sector which are too small or obsolete, and a lack of vertical integration.

The introduction of anti-pollution measures cannot fail to aggravate the problem when their cost is likely to be excessive for many production units with a capacity below 100,000 tons p.a.

This sector is also one of the most sensitive to short-term economic fluctuations, and it is quite clear that in order to modernise and adapt, it has more need than others of a certain amount of support from the public authorities.

These difficulties, which have been emphasised in statements by CEPAC and the trade union organizations, were explicity recognised in the Council's declaration of 1966 and the Commission's statement of June 1972.

2. Policy

Apart from commercial and balance of payments considerations, and although price increases will lead to a slowing down of the growth rate in paper consumption, the real problem stems from the expected world shortage of economically usable raw materials for the industry during the eighties. In the light of this, several related actions are required, taking account at the same time of Community obligations to other countries.

a) Supplies

Wood is a renewable raw material and timber resources can be substantially increased within the Community, either by improving the management of existing forest areas or by reafforestation.

Afforestation is the right answer to several problems:

- it restores economic value to land abandoned by agriculture and declining industries;
- it creates jobs for agricultural workers;
- it helps to mitigate the shortage of raw materials;
- it makes for a better ecological equilibrium;
- it improves the environment.

The draft Council directive on forestry measures which the Commission transmitted to the Council on 26 February 1974 was based on these considerations.

At present wood accounts for only three-sevenths of internal supplies, the remainder being made up by the recycling of waste paper. However, vast quantities of old papers are not reused, either because collection is not properly organised or because current techniques do not allow for their reinsertion into the production cycle.

Here, an effort must be made to improve the organization of and to industrialize the recovery industry, to establish a better mutual understanding between the recovery industry and the users and to develop new technology.

The Commission will shortly be able to put forward detailed proposals on this subject, on the basis of a study which it has commissioned.

b) Environment

Many problems arise from the fact that the pulp industry is a major source of pollution.

The introduction of anti-pollution standards and the possibility of taxes on water pollution will of necessity require the industry to install effective purification plant; to adopt production processes which are less polluting, or to move to other areas within the Community or to non-member countries. The possibility that this type of activity, particularly the production of some types of chemical pulp, will disappear from very heavily polluted areas. cannot be ruled out.

In any case, the cost of anti-pollution techniques in this industry is particularly high above all for smaller and older mills. The cost of anti-pollution equipment in new plants on the other hand represents only a small part of the total investment.

For this sector, the application of the principle "the polluter pays" and any possible exceptions to this rule, will have important consequences which deserve to be kept in mind, especially in connection with commercial policy.

As indicated elsewhere the Commission in the context of the Community action programme on the environment, will present its proposals on the subject of pollution in this sector to the Council before 1 July 1974.

c) **Structural reform**

Actions undertaken in the field of supply sources, and in pollution will only have their full effect to the extent that a Community industry continues to exist capable of using the available raw materials competitively and at the same time conforming to pollution standards.

But the Community pulp industry frequently lacks sufficiently modern plants, large scale operation, and the ideal geographical location to enable it to face up to these conditions. It follows that a restructuring and modernisation programme is required to improve the competitiveness of the pulp industry, and more especially to enable it to make its contribution to supplying the Community paper and paper-board industry with pulp.

If the Member States feel that the foregoing considerations justify their support for the structural reform and modernisation of the industry [1], the Commission considers that any aids granted should be restricted to investment; they should be co-ordinated and should comply with a number of criteria according to which their compatibility with the Treaty can be assessed.

In this event, the Commission would adopt a decision on a framework for aid to investment in the pulp industry.

In any case, the Commission thinks that the European Investment Bank could provide appreciable assistance to the financing of structural reform in the pulp industry and has asked the Bank to give particular consideration to this matter[2]. It considers that any support by the Bank would be the more effective if Member States agreed to guarantee loans contracted by the industry for structural reform.

The Commission is henceforth ready to examine proposals submitted to it for financing, from the European Social Fund, operations carried out under the measures taken pursuant to Article 5 of the Council decision of 1 February 1971. Moreover, if circumstances are

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[1] For the existing system of aids see Addendum to the Analytical Study.

[2] See Annex I

appropriate the Commission could consider the advisability of proposing to the Council that the pulp industry be eligible for grants from the European Social Fund under Article 4 which makes Fund an accessory instrument in the field of employment, to specific measures taken under Community policies.

c) Research

Research in forest management and operations, the use of new species of timber, the recycling of waste paper and the production process can make a decisive contribution to reducing the threat of shortage, eliminating pollution and improving the competitivity of the industry.

Notwithstanding that the research effort must be borne by the industry, the Commission nevertheless considers that it should co-ordinate the general and specific research programmes now in hand in the Member States. It reserves the right to put forward specific proposals for this sector under the general common research programme.

d) Commercial policy

Community policy should be sufficiently flexible to prevent future negotiations running counter to the structural reform programme or the securing of stable though partial supplies within the Common Market.

Any tariff or quantitative concession proposed by the Community must be matched by the obligation for its trading partners to guarantee to put a stop to certain practices likely to distort the rules of the market (as was the case in negotiations with EFTA countries).

When the time comes, it will also be worth considering how far and in what way the Community might enter into commercial and technical co-operation, based on mutual and reciprocal advantages, with certain countries which supply paper pulp. In particular, careful thought should be given to methods of financing projects of common interest by the financial agencies of the Community, notably the EDF.

3. Conclusions

Four practical steps could be taken without delay:

- adoption of the Council Directive on forestry measures;
- the application of anti-pollution regulations;
- EIB assistance in the financing of structural reform in the pulp industry;
- the support of the European Social Fund (Article 5).

The Commission also intends to carry through a set of co-ordination measures in the following areas:

- to improve the organisation of the waste paper recovery industry;
- research in forest management and operations, the use of new species, the recycling of waste paper and production processes.

Alongside the action envisaged above, it is worth considering:-

- the adoption of a decision on a framework for aids to the pulp industry;
- assistance from the reformed Social Fund (Article 4);
- the use of certain common research funds for this sector.

In any event, the Commission intends to hold periodic discussions with representatives of the Member States, management, trade unions and other interests concerned to study the practical effects of the various intervention measures.

The Commission will also lay down guidelines for commercial and co-operation policy which will complement action taken within the Community.

ANNEX I

1

COMMISSION
OF THE
EUROPEAN COMMUNITIES

Brussels,

The President

Mr. Y. Le Portz,
President
European Investment Bank

2, Place de Metz
LUXEMBOURG
Gd. Duché

Sir,

The Commission has just laid before the Council the attached communication on the problems of the pulp, paper and paperboard industry.

In view of its particular features, which are described in the analytical study of the industry, the Commission considers that a substantial effort must be made to reform the structures of the pulp industry, to ensure its competitiveness. This will, at the same time, enhance the value of the afforestation programme set out in the draft Council Directive on forestry measures.

It considers that the European Investment Bank could provide appreciable support for such an operation and wishes to submit the matter to the Bank for particular consideration.

I am therefore sending you the enclosed set of papers, which could assist the Bank in its examination of any applications which may be submitted to it by undertakings in the sector in question.

Yours faithfully,

F.X. ORTOLI

COMMISSION OF THE EUROPEAN COMMUNITIES

SEC(74) 1215 Final Annex

ANALYTICAL STUDY OF THE PULP AND PAPER

INDUSTRIES OF THE COMMUNITY

CONTENTS

INTRODUCTION

At the present time, the paper industry of the enlarged Community is the second largest in the world (after the United States). It comprises about 1400 undertakings, produces some 21 million tonnes of paper and paperboard and employs about 230,000 persons, not counting the greater number of jobs linked to the paper and paperboard processing industries and the publishing firms.

Furthermore, paper and paperboard consumption is growing rapidly throughout the world, and especially in the European Community where it is growing by about 5% a year.

Nevertheless, the overall Community balance of payments deficit for paper materials and products alone (wood, pulp, paper and paperboard) has continued to rise rapidly, and in 1972, reached approximately 2000 million u.a. (see Tables I and II).

The Community's net self-supply level (i.e., paper and paperboard produced from Community fibrous materials including recovery of waste paper) is under 50%. There is a risk that this level will fall sharply as a result both of the growth of consumption in the Community and of the tendency on the part of the exporting countries to prefer to export end-products rather than wood and pulp.

It can thus be seen that in the European Community the paper sector does not benefit from the dynamic market for its products. The analysis carried out as a result of this situation has brought several reasons to light:

1. Shortage of Community forestry raw materials in relation to present and foreseeable paper product requirements, and inefficient use of indigenous

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raw materials, whether of pulpwood, of annual plants or recovery of waste paper; annual plants;

2. Structural weakness of the production cycle in respect of vertical integration (paper and paperboard producers are insufficiently integrated in pulp production), and the existence of too many pulp production units with a capacity which is too low to be economically viable;

3. Availability of supplies of raw materials and pulp from external markets which are very limited and growing scarcer;

4. Insufficiently developed research and development compared to the industry's requirements;

5. Threat of increased production costs owing to the application of anti-pollution measures (a particularly serious threat to small and medium-sized pulp production plants).

The analysis and the conclusions are described in the following chapters and annexes.

CHAPTER 1: RAW MATERIAL SUPPLIES

The supply problem must be examined in terms of Western Europe as a whole. Present forestry supplies are already insufficient to meet internal paper and paperboard requirements, while the Scandinavian countries are now being forced to import pulpwood from the USSR. A Community policy must therefore be set in this context, taking into account not only the paper market in its present state but more important, encouraging measures aimed primarily at consolidating and developing future availability of raw materials on an economically sound basis.

Although paper and paperboard are produced mainly from pulpwood, a large amount is obtained from recycling; at the present time, about a third of Community paper and paperboard production is obtained from recycled paper and paperboard.

In addition, mention should be made of the possibilities of manufacturing paper from other fibrous materials, of which straw represents a major share.

I. Pulpwood

(Forestry in relation to pulpwood supply).

The structures of the main pulpwood consuming industries and of the producers of this raw material are badly adapted. Whilst pulpwood production units are fairly large in general - from 20000 to 150000 tonnes/year production, representing a consumption of 60000 to 500000 m^3 of wood a year - most raw material suppliers are small owners of woodlands which they exploit by means of a large number of very small forestry undertakings.

In a great number of cases, furthermore, the production of pulpwood from small-sectioned trees is the result of the desire to obtain a mature forest for the production of timber; the market for this kind of wood

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is more within the reach of the average woodland owner, since his major outlets are the sawmills for whom the price of the raw material is relatively less important. Moreover, the continued existence of obsolete and expensive forestry operating methods runs counter to any effort to make pulpwood profitable on a large scale.

The panel industry is also a consumer of pulpwood, but owing to its more recent origin and the characteristics peculiar to its product (higher added value and much faster growth in demand) it can adjust more easily to the ups and downs of the internal pulpwood market. For example it draws its raw material from the region where its plants are located, as it is expanding appreciably, its needs must be taken into account in planning a raw materials supply policy.

In 1970, the quantity of pulpwood from Community forests was in the region of 19 million m^3 (see Table III), to which about 9 million m^3 of waste recovered from sawmills must be added. If, however, the 13 million m^3 used to produce fibreboard and chipboard are deducted, the balance of 15 million m^3 of pulpwood only produces 5 million tonnes of Community paper and paperboard requirements.

Better use of existing forest resources, given a sustained effort up to 1980, would enable the output of pulpwood to be doubled; similarly, it would also be possible to double the quantity of waste recovered from the sawmills. If the rapidly growing requirements of panel manufacturers are deducted from these production figures, paper and paperboard production from Community wood would amount to about 8.5 million tonnes, or about 20% of the consumption estimated for 1980.

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In the longer term, the effect of improved utilization of existing forests would not be sufficiently far reaching without an increase in Community forestry potential, particularly in respect of pulpwood. In order to allow for both the rapid growth trend in the demand for pulpwood in relation to the demand for timber and the relatively slow growth of forests, steps should be taken at once to cause new woods to be planted wherever this is economically possible, and to ensure forest management that will substantially increase the output of timber for industrial use, especially of pulpwood.

Such an increase in the productivity of Community forests should, however, be achieved in conjunction with pulp production units (present or planned) of an economic size, whose supplies would be based on long-term contracts between forest owners and industry. These contracts would make provision for the rationalization of forestry management of forestry management and operations.

The main features of the present relationship between the pulp industry and forestry are:

1. Insufficient cooperation between the foresters (owners and operators) and the pulp industry; in particular, the virtual non-existance of forestry groupings or co-operatives working in cooperation with pulp production units;

2. Forestry management methods which are not conducive to the optimization of industrial forestry management methods and means;

3. Lack of sufficient co-ordination of activities and programmes of forestry research.

II. <u>Waste paper recyling</u> (see Table IV)

At the present time, the recovery of waste paper provides a third of the requirements in fibrous materials needed in the Community production of paper and paperboard.

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Recovery could rise from 27% to about 40% of paper and paperboard consumption if an effort were made to standardize the recovery market and to develop the technology so that a greater number of kinds of waste paper could be recycled economically.

For instance, if the recovery rate of 40% is reached by 1980, it will represent a potential production of 15 million tonnes of paper and paperboard, provided that necessary quantities of new pulp are available to produce a technically acceptable mixture.

Market standardization appears to be possible if the paper industry and the recovery industry manage to conclude long-term agreements which are really effective. Collectors will thus be encouraged to set up stable and therefore efficient recovery networks.

It will nevertheless be difficult to recycle low quality papers, which are the most plentiful and the most neglected at present, and for which advanced technologies are required if recycling is to be made economic.

It is obvious that collectors will not make the necessary investments in these new techniques if they lack a reliable market for their products.

The market in recovered paper and paperboard being primarily speculative, is subject to extreme short-term swings. Thus, world price movements for wood pulp lead to waste paper price-swings often three to five times as greate

In order to improve knowledge of the problems and possibilities of paper recovery and recycling, the Commission has briefed an expert to study the matter.

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The study, which will be carried out in close co-operation with the industry, will be ready by the end of 1974. Depending on the conclusions of the study, the Commission will decide whether more detailed research should be carried out in this field.

III. Other fibrous materials

The use of other raw materials by the Community paper industry is falling steadily. In 1972, consumption was about 1 million tonnes, composed almost wholly of straw. Italy and the Netherlands together produce 85% of straw pulp used by the paper industry. The use of straw comes up against technical difficulties such as the mechanisation of harvesting, and economic ones such as the organisation of a genuine market and the relatively high cost of transporting straw.

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CHAPTER 2: THE STRUCTURE OF THE INDUSTRY

The Community pulp and paper industry has an annual turnover of nearly 7000 million dollars and employs 230 000 people. Annual investments average about 10% of turnover (see table VI). The paper converting industry, which for its supplies depends largely on Community production of paper and paperboard, employs nearly 500 000 people.

The number of jobs in the pulp and paper industry has dropped sharply since 1970. Between 1971 and 1973 over 15% of jobs (for about 45 000 people) disappeared. This fall in employment was particularly marked in certain countries, especially in the United Kingdom, which clearly shows that it was not due only to an increase in productivity.

A study of investment trends from 1968 onwards shows that investment was too low from 1971 to 1973, a result of the unsatisfactory profitability of a large number of undertakings. As funds available for self-financing were insufficient, new investments were reduced.

I. The pulp industry

The various problems affecting the entire paper industry can all be seen in the pulp production sector. In relation to international competition, the pulp producer who processes the basic raw material (wood) is faced with difficulties both for internal supplies, as a result of the faulty structure of forest-management and operations, and for external supplies, as a result of wood prices being in the control of those countries which are major producers of pulpwood, pulp and paper. Transporting wood over long distances is anyhow not economically attractive.

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It is also at this point in the paper-making cycle that the major structural problems are to be found. They arise partly because the production units have developed in a national context where account has not always been taken of the international and particularly the European situation, and partly because there are still too many production units which are not related to an adequate timber-forest infrastructure.

Despite the major restructuring efforts of the last few years, the structure of the Community pulp industry remains far inferior to that of the Scandinavian and North American industries, as regards both average size (see Table VII) and the degree of concentration (see Table VIII).

a. The size of mills

Out of 213 pulp factories in the Community, only 16 have a capacity of over 100 000 tonnes p.a. (see Table IX). They account for less than 30% of Community production, while the same category of plant in Scandinavia and North America supplies generally more than 75% of production (see Table VIII).

Six of these factories are in France, three in Germany, three in Italy, three in Benelux and one in the United Kingdom. Of the 140 mills with an annual capacity of less than 25 000 tonnes, 119 are in three countries - 61 in Italy, 35 in Germany and 23 in France. In the medium range of 25 000 to 100 000 tonnes p.a., there are 57 mills, of which 18 are in France, 17 in Germany and 11 in Italy; France, Germany and Italy together supply 75% of the paper pulp production of the Community.

The chances of survival of the small factories will not be seriously threatened by market conditions, in view of the expected increase in the price of pulp, but they would suffer seriously from the application of strict anti-pollution regulations, and from increasing pulpwood prices.

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b. Types of paper-making pulps (see Table X)

1. Mechanical pulps: all member countries (except Luxembourg) produce mechanical pulps. The German factories supply about 36% of Community production. This production is often integrated with the production of newsprint.

2. Semi-chemical pulps: production has grown rapidly from 119 000 tonnes in 1960 to 671 000 tonnes in 1970.

3. Sulphite pulps: production has risen very slowly, from 860 000 tonnes in 1960 to 1 034 000 tonnes in 1970. Germany and France are the only major producers (85% of Community production).

4. Sulphate pulps: these pulps are produced in three Community countries, France (78%), Belgium (15%) and Italy (8%).

5. Pulps made from fibrous materials other than wood: this is mainly the production of pulps from straw, which are produced in all the Community countries except Ireland. Community production is falling slowly from year to year.

The situation may be summed up as follows:

(a) the development of overall pulp production capacity is hampered by difficulties of external supply and by the shortage of internal timber production at reasonable cost;

(b) the overall economy of pulp production is distorted by the number of production units which are too small or are badly located in relation to new supply conditions;

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(c) the financial cost of anti-pollution measures will be relatively greater for small production units.
The most efficient anti-pollution methods often cannot be used or cost too much for existing plant.

II. <u>The paper and paperboard industry</u>

In the pulp and paper industry as a whole, this industry accounts for about 85% of the turnover and probably a still higher proportion of employment.

Even after the attempts at structural reform and modernization of the last few years, factories in this industry are still too small on average (see Table XI).

It should be noted, however, that the 109 factories with an annual capacity of over 50 000 tonnes account for 43% of production.

The fragmentation of the Community paper industry results partly from the establishment of factories near the centres of consumption and partly from the high degree of specialization in production.

A comparison of the structure of the Community industry with that of the Scandinavian and North American industries shows a number of weaknesses:

(1) there is less concentration in Community production (see Table XII);

(2) the average production of the Community factories is lower. Even in the United States, which is not a major exporter, the average production per factory is four times as high (see table VIII);

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(3) the degree of integration of paper production with pulp production is only 42% in the Community, compared with 81% in Finland and 91% in Sweden.

It is this last point in particular which will jeopardize a large part of the paper and paperboard industry of the Community from the time when it will no longer be able to obtain pulp supplies at a cost enabling it to produce paper at competitive prices.

CHAPTER 3: MARKET TRENDS

I. Past trends

a. Paper pulps

1. Production and consumption

Production of paper pulp in the Community has not kept up with the trend of consumption (see Graph I), as can be seen from the following figures taken from Table XIII:

YEAR	PRODUCTION (1000 tonnes)	CONSUMPTION (1000 tonnes)	DEFICIT (1000 tonnes)	DEFICIT compared with consumption
1950	2.322	4.925	2.603	52,9%
1960	4.425	9.167	4.742	51,7%
1970	6.077	13.700	7.623	55,6%

This point becomes clearer still when a comparison is made of the mean annual growth rates of production and consumption during the decades 1950-60 and 1960-70:

PERIOD	MEAN ANNUAL GROWTH RATES	
	PRODUCTION	CONSUMPTION
1950 - 1960	6,7%	6,4%
1960 - 1970	3,2%	4,1%

These figures clearly demonstrate that the production growth-rate has slowed down as compared with that of consumption.

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This general slow-down results from differing trends in the growth rate of each kind of pulp. For example, the production of pulp from fibrous materials other than wood (see Table XV), which in 1950 amounted to 550 100 tonnes (or 23.7% of the total paper-pulp production), grew rapidly between 1950 and 1960 and then remained fairly stable at 1.2 million tonnes between 1960 and 1965. Thereafter it steadily declined to 0.8 million tonnes in 1971, a trend which was all the more noticeable in that the production of all other pulps continued to increase. Consumption of non-wood pulp has always been covered by domestic production.

To examine the growth of the market for various kinds of wood pulp for paper (see Table XIV), it is useful to show the main trends observed in recent years.

For mechanical, semi-chemical and bisulphite pulps, which at present account for more than 70% of the production and 50% of the consumption of paper pulps, the production growth-rate exceeded the consumption growth-rate during the last decade. On the other hand, during the same period, the production of sulphate and soda pulps grew less rapidly than consumption.

2. External trade

Owing to the chronic shortage of pulp in the Member Countries, pulp exports have been limited to some intra-Community trade; exports to other countries have always been negligible.

For the Community as a whole, therefore, imports have been equivalent to the deficit (difference between consumption and production).

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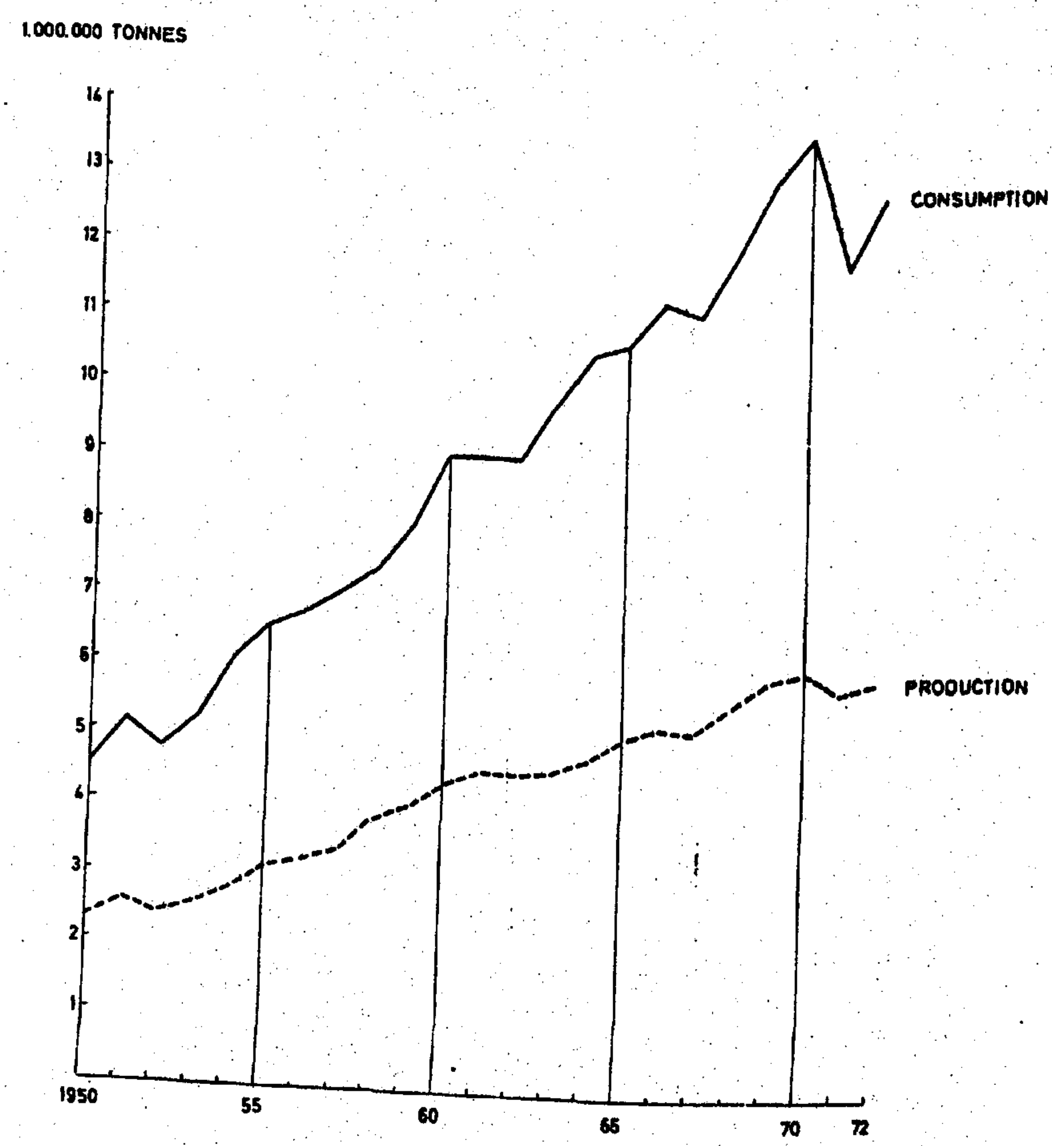
FIGURE I

PRODUCTION AND CONSUMPTION OF PULP IN THE COMMUNITY, 1950-1972



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Imports of pulps made from other fibrous materials are about 1% of total paper-pulp imports. The analysis is therefore conferred to paper-pulp from wood.

Graph II shows the growth from 1958 onwards of Community imports by country of origin.

Pulp imports (see Table XVI) experienced a first period of stagnation in 1964-67 at a level of 6 million tonnes. In the last five years they have fluctuated between 6 and 8 million tonnes. The Community has by far the biggest pulp deficit in the world, followed by the US and Japan, each with a deficit of about 1 million tonnes. The European OECD countries taken together already have a deficit of about 2 million tonnes. Canada, with net exports of 5 million tonnes, is the chief supplier of the deficit countries.

Looking at the sources of imports from various countries into the Community, it can be seen that the chief traditional suppliers of pulp to the Community, i.e., Sweden, Finland and Norway, have not increased their deliveries appreciably since 1964. The additional requirements have been supplied by Canada and the US, the part played by other suppliers being small (0.5 million tonnes).

b. Paper and paperboard

1. Production and consumption

The production of paper and paperboard has been stimulated by the rapid growth of consumption, but has not kept pace with it (see Table XVII and Graph III). Community production amounts to about 15% of world production, whereas consumption is about 20%. Community production of 20.7 million tonnes in 1970 lies between the Japanese

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figure of 13 million tonnes, the Canadian figure of 11 million tonnes, and the Scandinavian countries of 10 million tonnes on the one hand and the US figure of 45 million tonnes on the other.

Community production, which in 1950 was almost equal to consumption, covers only three-quarters of Community requirements in 1973:

YEAR	PRODUCTION (1000 tonnes)	CONSUMPTION (1000 tonnes)	DEFICIT (1000 tonnes)	DEFICIT by comparison with consumption
1950	7.022	7.552	530	7,0%
1960	13.280	16.000	2.720	17,0%
1970	20.701	26.916	6.215	23,1%

The growth rates have been as follows:

PERIOD	MEAN ANNUAL GROWTH RATES	
	PRODUCTION	CONSUMPTION
1950 - 1960	6,6%	7,8%
1960 - 1970	4,5%	5,3%

On examining the production trends of various kinds of paper and paperboard, it is clear that some important products are very underdeveloped in relation to consumption.

The first of these is newsprint, the production of which is at present declining; it amounts to about 2 million tonnes as against a consumption of 4-5 million tonnes.

The second is kraft paper and board, particularly kraftliner [illegible].

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FIGURE II

COMMUNITY IMPORTS OF WOODPULP FOR PAPER MAKING
(BY COUNTRY OF ORIGIN)

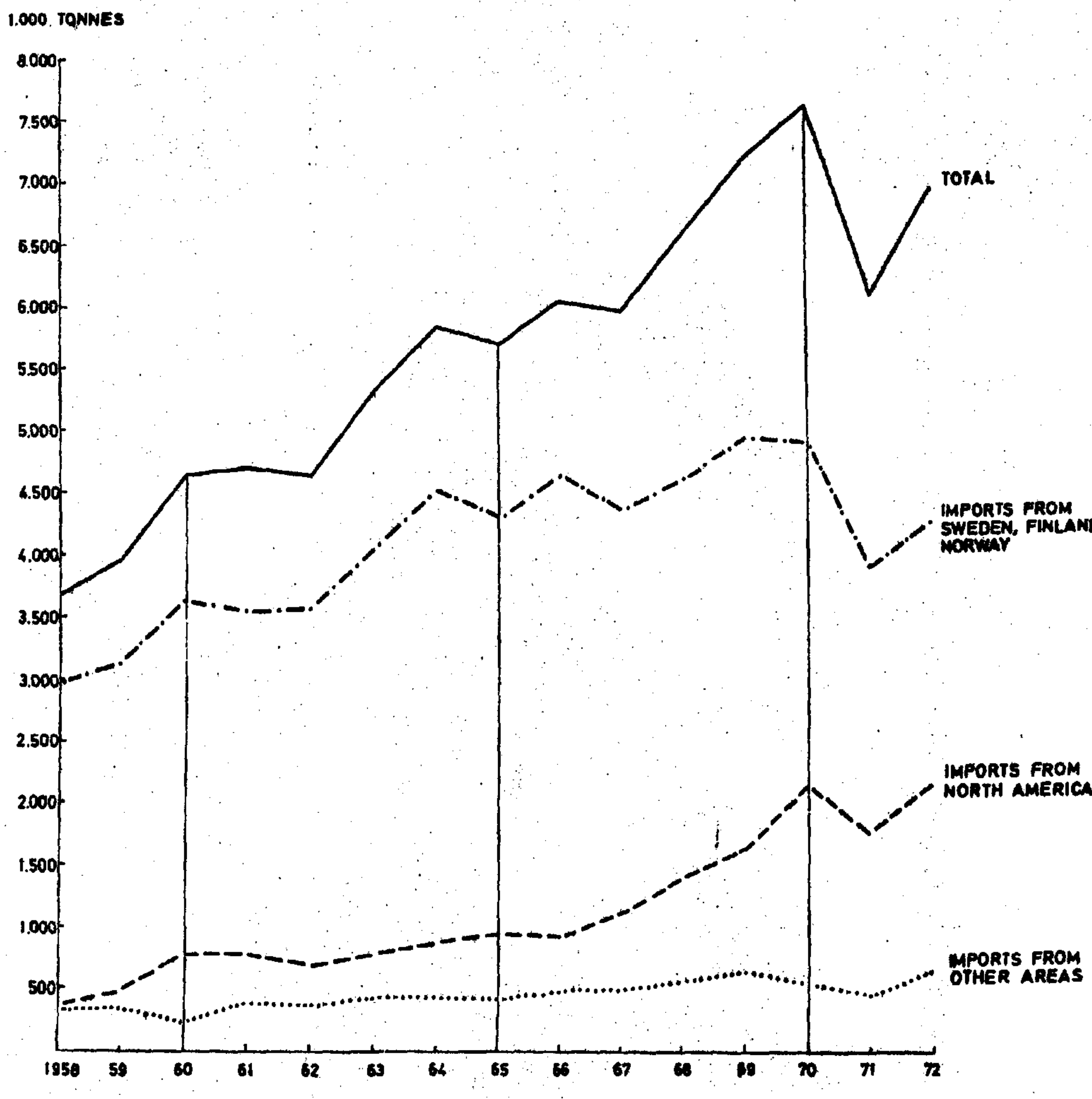

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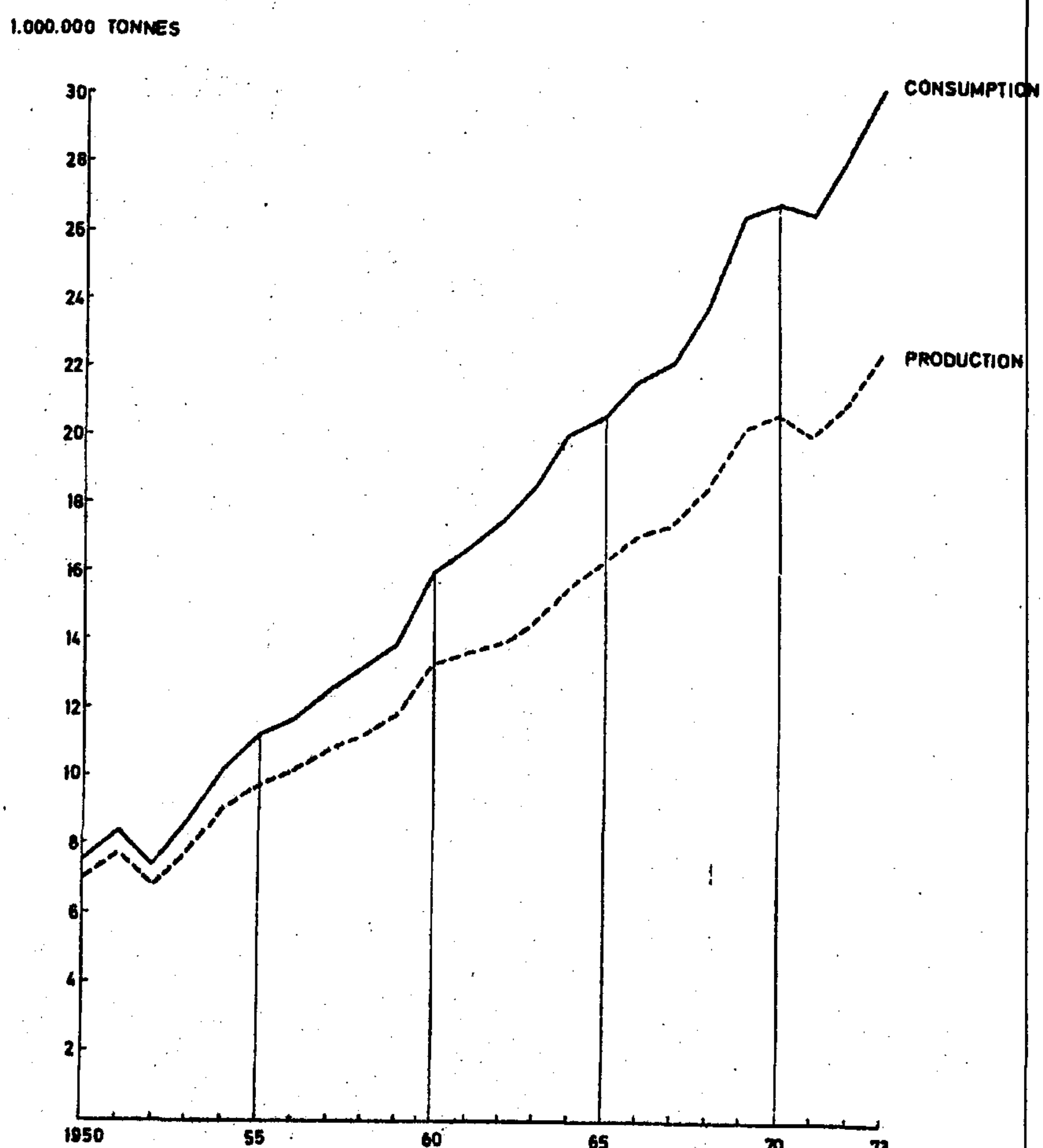
FIGURE III

PRODUCTION AND CONSUMPTION OF PAPER AND BOARD IN THE COMMUNITY, 1950-1973



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The Community does, however, produce increasing quantities of kraftliner substitutes made from waste paper. In the same way, the production of kraft papers for large bags has not kept up with consumption, whereas the production of other kraft papers and paperboard almost covers consumption. Thus there are big variations in the growth rates of various kinds of kraft paper and paperboard.

Growth in the production of most of the other kinds of paper and paperboard has been more vigorous and has kept fairly close to consumption.

2. External trade

The Community's external trade in paper and paperboard has grown as follows (in thousands of tonnes):

YEAR	INTRA-COMMUNITY TRADE	IMPORTS	EXPORTS	BALANCE
1960	601	3.065	356	- 2.709
1965	903	4.937	401	- 4.536
1970	1.723	6.979	722	- 6.257

Despite the rapid growth of intra-Community trade between 1960 and 1970, it still represents less than 10% of production, and exports towards third countries represent only about 3.5%.

Conditions on the world paper and paperboard markets have caused Community imports to increase from 3 million tonnes in 1960 to 7 millions in 1970 (see Table XVIII and Graph IV). The mean annual growth rate of imports for this period is 8.7%, which is much greater than the consumption growth rate of 5.3%. Even the big drop in production and consumption in 1971 did not stop the growth of imports.

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World trade is essentially intraregional, particularly within North America and Western Europe. Apart from this trade, North America is the only large region having a surplus which supplies all other regions to greater or lesser degrees, Western Europe foremost among them.

Sweden, Finland and Norway remain the chief Community suppliers (about 2/3). Imports from North America increased slowly in 1958-67, then rapidly in 1968-69 and levelled out in 1969-71. Imports from other countries remain small (0.5 million tonnes).

c. The pulp-paper balance

Graph V shows the growth of the various factors in the consumption of paper and paperboard in the Community, apart from raw materials such as wood, straw, etc... The Community's internal sources, i.e., pulp produced within the Community and recycled paper (part of which moreover comes from imported paper and paperboard), do not match the curve of paper consumption. This is mainly due to the weak growth of paper-pulp production, since the level of recovery of waste paper has slightly increased as a share of the consumption of paper and paperboard. Between 1950 and 1960 the level rose from 25 to 28%, though with considerable fluctuations from year to year.

The growing gap between internal sources and consumption of paper and paperboard is bridged by the import of either pulp or paper and paperboard. It is this last form of import which is increasing most rapidly. The quantity of imported pulp, which in 1958 was still more than 60% greater than the quantity of paper and paperboard imports, has since 1971 fallen below it (see Graph VI).

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FIGURE IV

COMMUNITY IMPORTS OF PAPER AND BOARD, BY COUNTRY OF ORIGIN

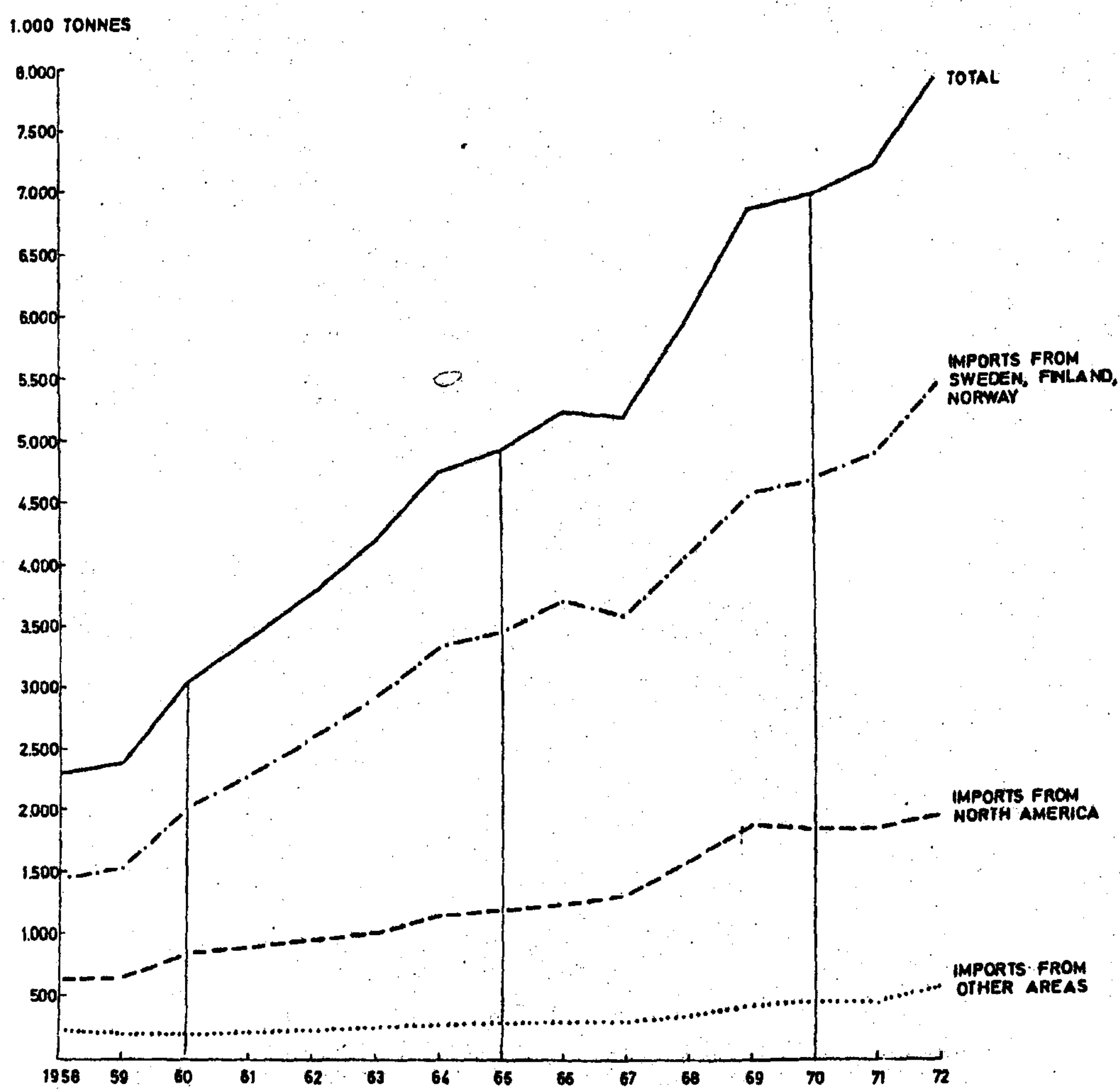

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FIGURE V

THE MARKET FOR PAPER MATERIALS IN THE COMMUNITY

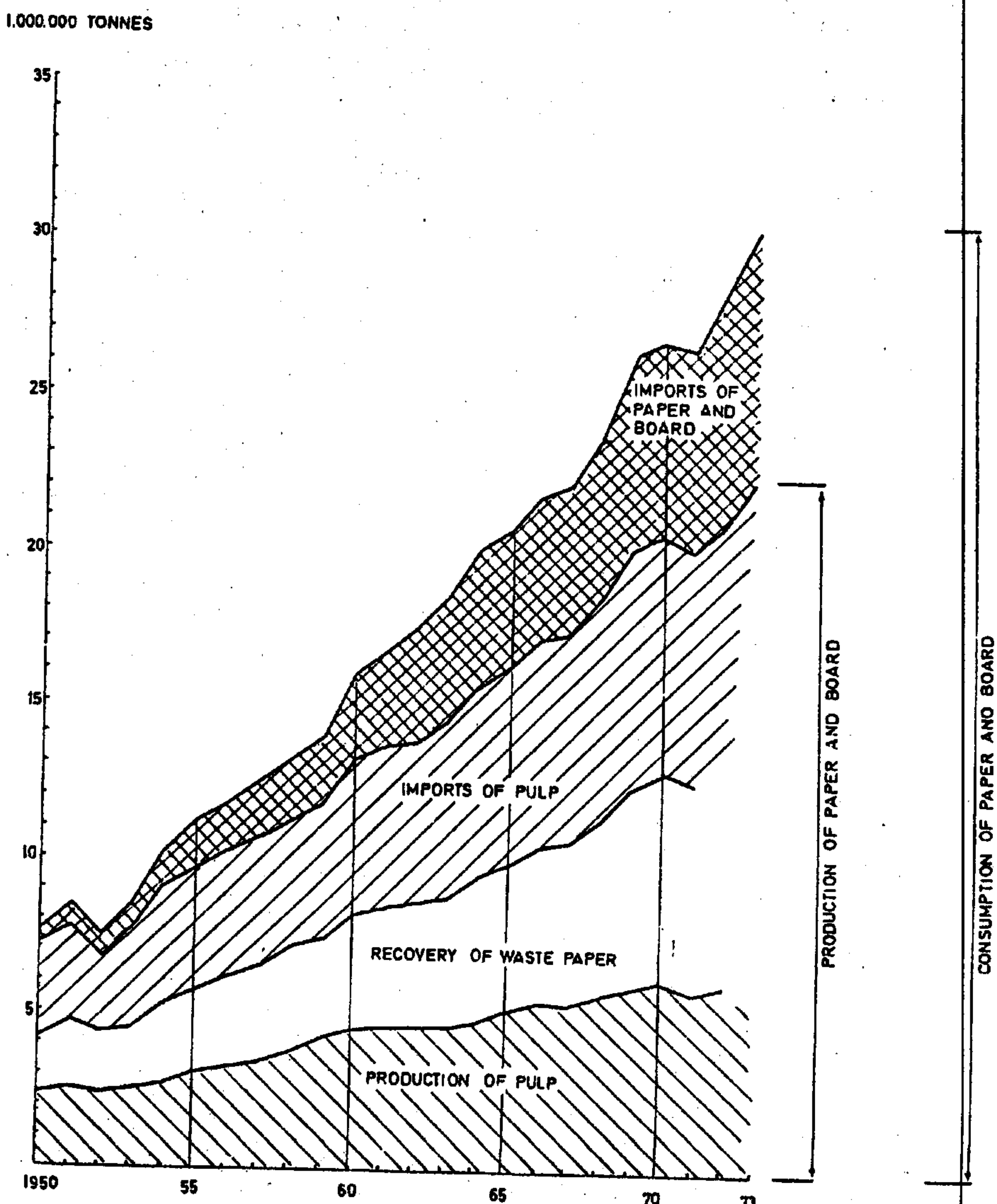

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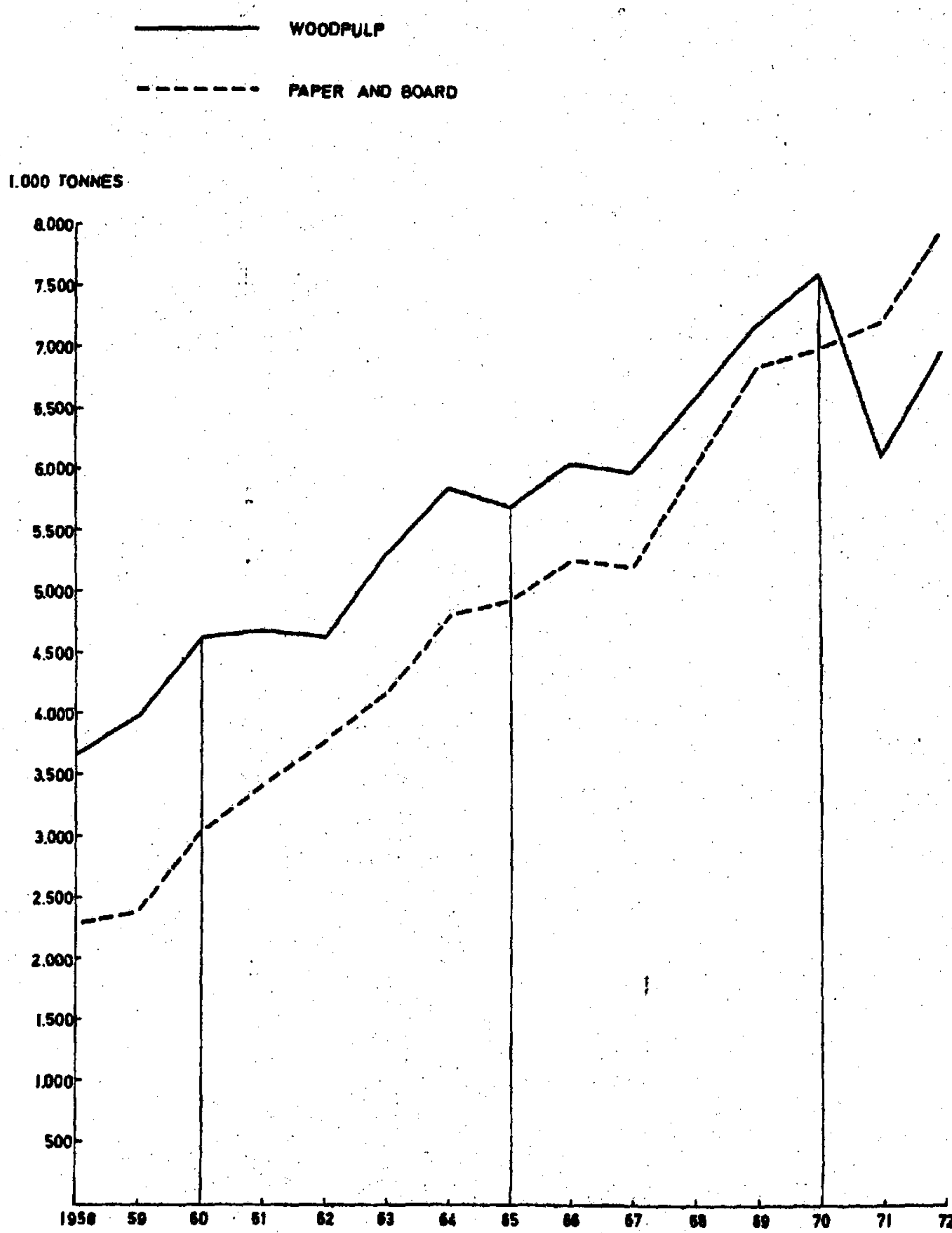
FIGURE VI

COMMUNITY IMPORTS



This is due to the natural tendency of the chief exporting countries to export the finished product. As Graph VII and Tables XIX and XX show, exports of paper and paperboard from Scandinavia have been greater than pulp exports since 1968. North America has always exported more paper and paperboard than pulp, and in the medium term will remain the only major supplier of pulp and/or paper to the other large regions of the world.

II. Future outlook

Community consumption of paper and paperboard has grown at a mean annual rate of 5.3% during 1960-70. Assuming an annual rate of 5% in 1970-75 and 4.5% in 1975-80, prospects are as follows:

(in 1970	26,916,000 tonnes)
in 1975	34,350,000 tonnes
in 1980	42,810,000 tonnes.

The mean annual growth rate in paper and paperboard production in 1960-70 was 4.5%.

Assuming that the industry continues to expand at the same rate, production will be as follows:

(in 1970	20,701,000 tonnes)
in 1975	25,800,000 tonnes
in 1980	32,150,000 tonnes.

The deficit will grow as follows:

(in 1970	- 6,215,000 tonnes)
in 1975	- 8,550,000 tonnes
in 1980	-10,660,000 tonnes.

.../...

In 1970 13,694,000 tonnes of paper pulp (6,077,000 tonnes of internal production + 7,617,000 tonnes of imports) were needed to produce 20,701,000 tonnes of paper and paperboard (or 66% of pulp and 34% of wastepaper).

If by a greater use of waste paper it becomes possible to produce paper and paperboard in 1980 with 60% of new pulp, the pulp requirements would be 19,290,000 tonnes. Paper-pulp production grew at an annual rate of 3.2% in 1960-70. This rate will be very hard to keep up in view of the shortage of supplies of pulp wood, the large investments required in an industry which has hardly recovered from the crisis of 1970-72, and the big costs of anti-pollution equipment. If nevertheless a growth rate of 3.2% is assumed for the period 1970-80, then Community paper-pulp production will grow as follows:

(in 1970	6,077,000 tonnes)
in 1975	7,115,000 tonnes,
in 1980	8,325,000 tonnes.

Pulp import requirements in 1980 would therefore amount to 10,965,000 tonnes, to be added to a paper and paperboard deficit of 10,660,000 tonnes.

In view of the trends in the major exporting countries mentioned in Chapter 3 (I), the possibility of importing this kind of quantity in the medium term (1980) would appear to be very limited.

The relative shortage on the world pulp market will reduce the margin between paper prices and pulp prices. Non-integrated paper production (which in the Community represents more than half the production) will probably be the first victim.

An increase of total pulp production necessarily requires a choice between different types of pulp, taking into consideration the qualities relevant to each production process.

.../...

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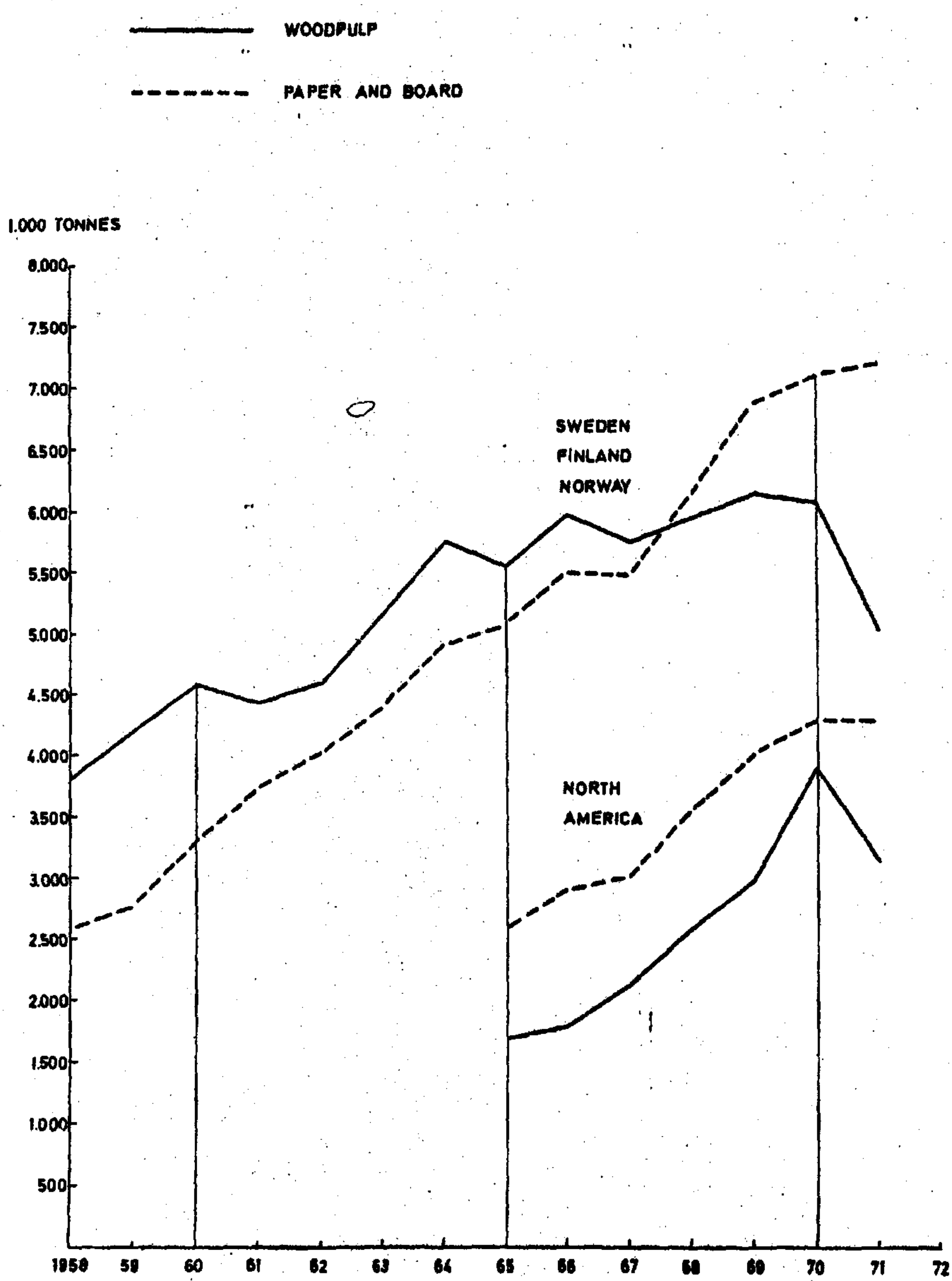
FIGURE VII

EXPORTS



The manufacturing processes for the various kinds of pulp use differing specific amount of water, energy and wood (hardwood and resinous), and cause differing air and water pollution rates.

Choice of type of pulp to be produced has little effect on the range of papers and paperboard produced; which is determined by the needs of the market.

However, although the Community industry is tending towards the production of a large variety of papers with high specific value, the importances of mass-consumption paper must be noted, as it forms the besis of the paper and paperboard industry and is the source of internal supply for the press and the paper and paperboard coverting industry.

CHAPTER IV: RESEARCH AND DEVELOPMENT

Extensive research and development has been going on for a long time in the paper industries of all the world's industrial countries, and the money spent appears to reflect the relative rate of expansion of the industry in each region.

For the countries of the European Community as a whole, the following are general data on research in the paper industry:

- Full-time staff number about 900 persons, including 220 university graduates or persons with equivalent qualifications, 450 technicians and 230 persons for administrative services; about half work in public, national and university research centres, and half in some of the biggest industrial firms.

- The research budget is estimated at about 20 million u.a. for running costs alone (not including depreciation of buildings, laboratories and major items of equipment); owing to the great intrinsic variety and the complex and often confidential management methods, it would be speculative to present a more detailed statement of the sums devoted to research.

- The equipment of research centres includes physical, chemical, mechanical and electronic laboratories of varying size; several centres have a pilot paper machine for testing new manufacturing processes and products.

.../...

However, although the money spent on research is commensurate with the scale of the industry, it does not altogether meet the industry's very varying needs.

In Canada and the North European countries, the industry has developed and continues to develop mainly on the basis of the big local forest resources, and is largely directed to satisfying an export market for articles of mass consumption (newsprint, kraft paper, etc.), whereas in the European Community the paper industry has had to take into account the growing shortage of raw materials and the need to satisfy a highly diversified domestic market.

This explains the peculiar nature of the Community's paper needs and the fact that the research needed by the Community industry arouses little interest in countries allegedly the leading world specialists in paper technology.

To define the main research requirements of the Community industry, it is sufficient to recall its special characteristics:

- Its raw material resources are comparatively scare and very varied (resinous-wood forests, hardwood coppices or forests, fast-growing trees, recyclable waste paper, sawmill waste, straw and other annual plant matter, and imported paper pulps); according to the quantity of material available or recoverable, each of these sources needs to be used to the best advantage by the industry.

- Its consumers often have more varied needs and higher quality requirements than the other large consumer areas in the world.;

- The very variable but usually middling size of factories is in general justified by the uneven geographic spread of local or imported raw-material sources.

.../...

- The stringency of the new anti-pollution regulations raises important technical and financial problems.

The main research topics which must be taken up can be arranged under two traditional headings, namely, the production processes and the products themselves. Each of these two headings is developed on the basis of the special characteristics of the Community industry as set out above. An indicative list of the research topics arrived at in this way is given at the end of this chapter.

These research topics, although essential to the functioning of the Community paper industry, are not fully covered in the research centres, not only because not enough money is spent on them, but also because of the lack of Community-wide coordination of the research undertaken in each Member State by the specialized research centres, the universities and industry.

This industry above all needs a common set of methods and a common programme which would be of interest to all the firms in the industry. This patchiness arises partly from the absence of coordination of the research efforts supported by the national authorities of each Member State.

It must be admitted that up to the present the many and certainly helpful links which exist between the public organizations responsible for R & D have been mainly concerned with the exchange of experience already gained and have not yet begun to institute a genuine division of labour best adapted to the technical and intellectual endowment of each of the centres concerned.

.../...

The R & D problems dealt with in this chapter mainly concern industrial activities. But research also needs to be extended to forestry, timber management and lumber operations. These problems, however, come within the competence of Agriculture and Forestry, and must be approached with an eye to the needs of other areas of activity or centres of emphasis such as the wood industries, the environment, ecology and regional planning.

LIST OF SUGGESTED RESEARCH TOPICS ESTABLISHED IN RESPONSE TO REQUESTS FROM THE PAPER INDUSTRY

1. Research on the production process

   a) Preparation and processing of raw materials

- improved use of raw materials: waste from sawmills and forestry operations, recovered fibres (waste papers must be cleared of plastics and gums and ink must be removed more thoroughly), annual plants;

- non-polluting processes: in-factory barking of trees, use of reduced quantities of lye, removal of colour from waste water, (these processes must be developed especially for medium-sized plant, producing 50 to 100 000 tonnes p.a.);

- reduction in water consumption (development of dry processes) and reduction in energy consumption;

- development of economic chemical processing techniques, without sulphonic gas combination, or ligno-sulphonic acid, which is difficult to extract;

- development of economic processes for the destruction of sludge or its use for other purposes.

   b) Plant and equipment

- improvement of methods for collecting and preparing raw materials: undergrowth, trimmings, mountain forest, sorting of waste papers, straw and other annual plants.

.../...

- standardization of plant design and therefore of machinery in order to reduce investment costs;

- simplification of drying processes leading to smaller size machines (not of factories) for certain types of paper;

c) Production quality

- improved cleaning;

- increased automation throughout the cycle, with resultant improved quality control and productivity.

2. Research on products

a) pulp

- improvement of qualities by new cooking processes;

- altering tho pulp by subsequent processing such as bleaching and combining with polymers and fibres;

- use of synthetic fibres;

b) paper and paperboard

- adaption to new uses (by association of natural fibres and synthetic polymers);

- in-the-mass and surface processing;

- coating;

- non-woven products;

- complex products such as combinations of paper and film.

.../...

Mention should also be made pro memoria of research to increase raw material resources in three areas:

- forestry and timber research to increase the yield from land given over to the production of fibrous materials;

- more economic management and exploitation of timber-forests;

- recovery of sawmill waste and new sawmill techniques to upgrade and increase the amount of recoverable waste without reducing the production of sawn timber.

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CHAPTER 5: ENVIRONMENT

Chapter 5 of the action programme for the environment approved by the Council on 22 November 1973 (OJ C 112 of 22 December 1973) provides for action specific to certain industrial sectors. One of the first priorities is for combating pollution in the paper industry. The Commission's departments have begun the following studies in this field:

- Studies on the nature of the pollution problems to be solved.
- Studies on techniques already established or under development, and on current research, including problems of recycling.
- Studies of the measures taken by the Member States.
- A comparative study of the additional measures that need to be taken by the Member States in order to achieve a specified reduction in pollution.

The Commission will submit proposals on this subject before 1 July 1974.

It is, however, already possible to perceive some factors which will strongly influence Community pulp manufacturers. Pulp production is the key area of pollution in the paper industry. Apart from the legal aspects of pollution, and particularly the criteria for assessing its effects, it is clear that anti-pollution techniques can be expensive. Sometimes the costs increase very sharply, either because the production units are too small, or because they use a manufacturing method which is difficult or impossible to adapt to anti-pollution processes at a reasonable cost; often the production units have both these failings.

.../..

TABLE I

COMMUNITY TRADE IN PULP AND PAPER PRODUCTS

1972

1.000 UC

Products	Intra-community trade	External trade		External trade balance
	Imports	Imports	Exports	
Pulpwood (1)	17.969	52.888	3.966	- 48.922
Pulp and waste paper	93.859	1.245.883	26.136	- 1.219.747
Paper and board	855.788	1.625.540	466.585	- 1.158.955
Pulp, paper and board products	340.155	119.232	196.518	+ 77.286
Printed products	547.562	238.816	607.364	+ 368.548
Total	1.855.333	3.282.359	1.300.569	- 1.981.790

(1) 1971 figures

TABLE 11

TRADE IN PAPER PRODUCTS BY MEMBER COUNTRY

1972 — 1.000 UC

Products	Intra-community trade		External trade		External trade balance
	Imports	Exports	Imports	Exports	
BELG/LUX.					
Pulpwood (1)	5.987	310	9.005	1	- 14.682
Pulp and waste paper	3.768	27.010	58.251	1.917	- 33.092
Paper and board	137.603	126.252	75.074	65.972	- 19.553
Pulp,paper and board products	55.446	56.803	4.897	5.559	- 8.971
Printed products	99.734	79.153	5.378	11.45[illegible]	- 15.491
	313.538	289.578	153.605	[illegible]	- 91.789
DENMARK					
Pulpwood (1)	-	-	-	373	373
Pulp and waste paper	-	7.427	13.552	1.559	- 4.577
Paper and board	14.671	4.676	111.136	5.572	- 114.529
Pulp,paper and board products	10.361	7.244	25.275	9.150	- 20.173
Printed products	13.020	7.427	10.339	17.422	- 5.310
	38.052	25.774	169.352	38.174	- 145.515
GERMANY					
Pulpwood (1)	5.400	3.375	10.573	3.149	- 9.540
Pulp and waste paper	29.861	16.397	262.312	9.110	- 257.676
Paper and board	251.142	213.3[illegible]	414.229	122.484	- 329.597
Pulp,paper and board products	69.872	99.730	24.467	53.919	53.209
Printed products	50.114	100.635	53.253	153.540	140.009
	415.389	433.518	754.934	341.100	- 405.705
FRANCE					
Pulpwood (1)	119	13.915	18.181	444	- 3.941
Pulp and waste paper	19.79[illegible]	18.449	19[illegible].939	12.4[illegible]	- 1[illegible]7.[illegible]27
Paper and board	182.692	120.342	172.214	65.[illegible]72	- 173.492
Pulp,paper and board products	73.772	43.712	14.38[illegible]	53.251	5.893
Printed products	195.995	90.162	62.902	127.[illegible]2	- 51.733
	477.366	276.571	465.624	255.729	- 411.190
IRELAND					
Pulpwood (1)	-	399	-	-	399
Pulp and waste paper	851	755	6.717	-	- [illegible]
Paper and board	13.9[illegible]7	10.745	27.[illegible]26	-	- 30.9[illegible]7
Pulp,paper and board products	13.045	4.413	[illegible]	[illegible]	- 9.2[illegible]
Printed products	20.335	[illegible].154	1.437	2.205	- 11.414
	[illegible].149	24.477	35.861	2.49[illegible]	- [illegible].023
ITALY					
Pulpwood (1)	4.704	-	9.460	-	- 13.164
Pulp and waste paper	24.339	109	209.915	413	- 224.734
Paper and board	81.438	51.052	69.097	52.42[illegible]	- 17.046
Pulp,paper and board products	18.061	17.973	7.329	15.935	9.418
Printed products	23.595	78.337	12.109	43.32[illegible]	85.968
	132.138	147.370	297.901	123.111	- 159.559
NETHERLANDS					
Pulpwood (1)	1.350	786	5.048	-	- 5.512
Pulp and waste paper	10.543	14.350	97.151	529	- 92.815
Paper and board	139.359	142.904	101.032	44.344	- 53.143
Pulp,paper and board products	73.772	83.472	14.389	10.977	6.289
Printed products	58.609	94.784	14.444	28.513	42.244
	281.533	326.295	232.063	[illegible].353	- 193.037
UNITED KINGDOM					
Pulpwood (1)	409	-	1.520	-	- 1.929
Pulp and waste paper	4.599	3.459	407.936	1.149	- 406.026
Paper and board	48.975	57.461	654.962	97.[illegible]83	- 539.573
Pulp,paper and board	15.[illegible]25	29.352	29.[illegible]72	[illegible]	39.373
Printed products	70.159	53.521	59.954	223.[illegible]	139.397
	149.050	153.953	1.151.028	372.325	- 773.658

(1) 1971 figures

TABLE III

PULPWOOD

PRODUCTION

in 1.000 m^3

YEAR	BELG/LUXEN.	DENMARK	GERMANY	FRANCE	IRELAND	ITALY	NETHERL.	U.K.	COMMUNITY
1968	672	57	5.400	5.774	80	1.835	285	794	14.897
1969	58 (a)	83	5.751	7.213	70	1.805	315	1.110	16.405 (a)
1970	450 (b)	124	6.746	8.837	70	1.623	355	1.002	19.207 (b)
1971	463	123			80	1.695	391	1.071	
1972		78				981	580	1.032	

IMPORTS (excluding intra-Community trade)

YEAR	BELG/LUXEN.	DENMARK	GERMANY	FRANCE	IRELAND	ITALY	NETHERL.	U.K.	COMMUNITY
1968	351,3	0,5	537,3	733,4		1.342,0	340,0	308,0	3.612,5 (c)
1969	334,4	-	1.031,8	1.051,5		1.127,1	331,3	255,3	4.131,4 (c)
1970	428,9	-	1.238,4	1.243,0		1.521,8	307,1	281,6	5.020,8 (c)
1971	436,3	--	652,4	752,1		1.009,2	218,9	74,7	3.143,6 (c)
1972		-	40[illegible],7	659,2		1.245,6	149,9		

a) Data for Belgium not available
b) Data for Luxembourg not available
c) excluding Ireland
Source : F.A.O. Timber Bulletin for Europe

TABLE IV

WASTE PAPER

PRODUCTION

1.000 tonnes

YEAR	BELG/LUX.	DENMARK	GERMANY	FRANCE	IRELAND	ITALY	NETH.	U.K.	COMMUNITY
1968	252,0	81,0	1.909,0	1.108,0	18,0	655,0	613,0	1.827,0	6.463,0
1969	280,0	114,0	2.148,0	1.209,0	18,0	730,0	686,0	1.923,0	7.108,0
1970	316,0	121,0	2.292,0	1.319,0	18,0	728,0	725,0	2.062,0	7.581,0
1971	290,0	118,0	2.304,0	1.373,0	-	731,0	721,0	1.940,0	7.477,0

IMPORTS (Excluding Intra-Community trade)

YEAR	BELG/LUX.	DENMARK	GERMANY	FRANCE	IRELAND	ITALY	NETH.	U.K.	COMMUNITY
1968	0,1	8,7	65,2	11,8	3,1	139,0	8,2	3,9	239,0
1969	-	6,7	62,2	16,2	0,4	170,5	13,8	8,5	278,3
1970	0,3	11,2	61,1	13,5	0,1	166,6	7,0	5,7	265,5
1971	0,9	4,6	52,4	12,6	-	183,4	6,4	7,6	267,9

Source : O.E.C.D. The Pulp and Paper Industry

PRODUCTION AND CONSUMPTION OF WASTE PAPER

TABLE V

1.000 tonnes

YEAR	BELG/LUX.		DENMARK		GERMANY		FRANCE		IRELAND		ITALY		NETH.		U.K.		COMMUNITY	
	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.
1950	65,0	71,0	31,0	26,0	419,4	470,2	270,0	281,0	8,3	8,3	120,0	131,5	130,0	93,2	851,0	891,0	1.895,7	1.972,2
1951	65,0	70,5	35,0	33,0	612,7	610,6	368,0	420,0	9,7	9,7	120,0	130,6	224,0	165,4	1.095,0	1.014,0	2.549,4	2.453,3
1952	65,0	68,2	34,0	30,0	490,3	542,5	284,0	298,0	8,8	10,0	115,0	137,5	145,0	91,3	852,0	835,0	1.994,1	2.012,5
1953	65,0	71,2	34,0	27,0	589,8	654,8	338,0	386,0	9,0	13,5	118,0	146,2	180,0	132,5	898,0	928,0	2.273,8	2.359,2
1954	95,0	95,5	37,0	26,0	721,0	795,5	432,0	459,0	18,5	37,3	133,3	157,2	236,0	150,4	1.056,0	1.060,0	2.728,8	2.780,[illegible]
1955	101,3	101,0	56,0	43,0	806,1	892,2	486,7	520,9	19,0	44,4	126,5	152,0	248,8	143,4	1.151,0	1.114,0	2.995,4	3.010,[illegible]
1956	108,2	105,5	58,0	47,0	875,0	973,8	523,0	584,0	22,0	29,4	139,3	177,8	244,0	153,9	1.174,0	1.079,0	3.143,5	3.150,[illegible]
1957	115,0	110,0	74,0	62,0	954,0	1.054,0	612,0	665,0	22,0	36,0	182,0	232,0	264,4	161,7	1.205,0	1.113,0	3.428,4	3.433,7
1958	117,0	99,0	68,0	66,0	996,0	1.111,0	621,0	672,0	22,0	38,0	223,0	262,0	263,0	176,0	1.271,0	1.180,0	3.581,0	3.604,[illegible]
1959	124,0	105,0	60,0	46,0	1.040,0	1.171,0	624,0	660,0	7,0	18,0	216,0	268,0	293,0	201,0	1.308,0	1.240,0	3.672,0	3.709,[illegible]
1960	147,0	117,0	87,0	68,0	1.175,0	1.346,0	714,0	762,0	11,0	29,0	232,0	307,0	334,0	215,0	1.481,0	1.382,0	4.131,0	[illegible].226,[illegible]
1961	152,0	118,0	97,0	73,0	1.209,0	1.342,0	754,0	821,0	11,0	37,0	344,0	401,0	360,0	258,0	1.520,0	1.402,0	4.447,0	4.452,[illegible]
1962	164,0	124,0	93,0	70,0	1.232,0	1.375,0	810,0	871,0	34,0	47,0	419,0	495,0	361,0	249,0	1.459,0	1.352,0	4.572,0	4.583,[illegible]
1963	202,0	139,0	92,0	60,0	1.308,0	1.504,0	875,0	933,0	14,0	28,0	299,0	424,0	386,0	265,0	1.542,0	1.433,0	4.718,0	4.785,[illegible]
1964	205,0	141,0	107,0	67,0	1.470,0	1.698,0	995,0	1.043,0	14,0	27,0	383,0	484,0	433,0	316,0	1.638,0	1.524,0	5.243,0	5.300,[illegible]
1965	218,0	149,0	68,0	30,0	1.586,0	1.820,0	947,0	975,0	15,0	30,0	420,0	534,0	438,0	314,0	1.764,0	1.698,0	5.456,0	5.540,[illegible]
1966	231,0	152,0	81,0	43,0	1.601,0	1.780,0	1.041,0	1.1[illegible],0	15,0	21,0	513,0	723,0	477,0	351,0	1.702,0	1.612,0	5.661,0	5.792,[illegible]
1967	254,0	155,0	77,0	40,0	1.626,0	1.795,0	1.073,0	1.130,0	15,0	21,0	627,0	835,0	555,0	467,0	1.806,0	1.580,0	5.913,0	6.023,[illegible]
1968	252,0	146,0	81,0	47,0	1.909,0	2.155,0	1.103,0	1.136,0	18,0	32,0	655,0	833,0	613,0	507,0	1.827,0	1.744,0	6.463,0	6.601,[illegible]
1969	280,0	157,0	114,0	81,0	2.148,0	2.307,0	1.203,0	1.244,0	18,0	30,0	730,0	999,0	686,0	546,0	1.923,0	1.883,0	7.108,0	7.247,[illegible]
1970	316,0	176,3	121,0	88,0	2.292,0	2.423,0	1.313,0	1.369,0	18,0	29,0	728,0	1.012,0	725,0	576,0	2.062,0	1.990,0	7.581,0	7.668,[illegible]
1971	290,0	141,3	118,0	75,0	2.304,0	2.464,0	1.373,0	1.507,0			731,0	989,0	721,0	604,0	1.940,0	1.872,0	(7.477,0)	(7.672,[illegible])
1972	349,8	147,2	165,9	130,0	2.374,2	2.603,1	1.465,4	1.636,5					735,3	606,1	1.931,6	1.869,2		
1973																		

Source : O.E.C.D. The Pulp and Paper Industry

TURNOVER,EMPLOYMENT AND INVESTMENT IN THE PULP AND PAPER INDUSTRY

TABLE VI

	UNIT	YEAR	BELG/LUX.	DENMARK	GERMANY	FRANCE	IRELAND	ITALY	NETH.	U.K.	COMMUNITY
Turnover	million U.C.	1968	157,4	58,0(5,3)	1.046	941(183)		759,9	273,1	1.103	(b) 4.338,4
		1969	192,9	66,3(6,5)	1.174	1.017(190)		816,3	288,8	1.196	(b) 4.741,3
		1970	216,4	72,1(8,5)	1.361	1.103(215)		815,6	307,3	1.318	(b) 5.193,4
		1971	210,7	70,1(7,9)	1.372	1.197(239)		675,0	323,2	1.296	(b) 5.134,0
		1972		75.9(7,8)	1.501	1.295(248)		762,8	347,7	1.368	(b)(c) 5.550
		1973		(9,1)	1.800	1.452(282)		1.072,3		1.536	(b)(c) 6.675
Numbers Employed		1968	9.829	3.350 (340)	67.532	48.415(7.392)	1.623(41)	39.241	13.477	92.300	275.767
		1969	10.214	3.370 (350)	68.701	48.728(7.520)	1.734(41)	39.323	13.898	92.700	278.658
		1970	9.890	3.410 (360)	70.503	48.977(7.585)	1.857(41)	40.517	13.612	91.500	280.266
		1971	9.360	3.140 (340)	66.492	47.337(7.397)	1.904(41)	39.790	12.464	73.000	253.487
		1972	9.814	2.975 (350)	61.050	46.718(7.197)	1.894(41)	39.506	12.385	70.200	244.542
		1973	10.150	(355)	59.750	46.100(6.700)	1.833(41)			68.650	(c) 234.600
Investment	million U.C.	1968	16,8	21,8(a)	120	78(15)		160,3	9,8	52,4	(b) 459,1
		1969	19,1	8,4(a)	155	82(18)		133,5	10,6	74,1	(b) 482,7
		1970	26,8	13,1(a)	214	94(28)		61,4	21,3	77,6	(b) 508,2
		1971	30,1	19,3(a)	126	99(23)		20,4	18,9	56,2	(b) 369,9
		1972	27,8	10,4(a)	100	83(15)		4,3		59,0	(b)(c) 300
		1973	27,9		123	77(14)		35,2		73,4	(b)(c) 360

( ) = of which pulp industry
(a) including paper-converting and the graphic industry but excluding the pulp industry
(b) excluding Ireland
(c) estimated
Source : European Confederation of Pulp and Board Industries (CEPAC)

Table VII

AVERAGE OUTPUT PER PLANT

1970

1000 tonnes per annum

	Pulp	Paper and Board
COMMUNITY	27	16
SWEDEN	86	65
FINLAND	94	109
U.S.A.	131	64
Canada	156	99

Table VIII

STRUCTURE OF THE PULP INDUSTRY

1970

COUNTRY	Less than 5000 tonnes p.a.		5000 - 50000 tonnes p.a.		50000 - 100000 tonnes p.a.		over 100000 tonnes p.a.		TOTAL	
	No. of plants (1)	% of output	No. of plants (1)	% of output	No.of plants (1)	% of output	No. of plants (1)	% of output	No. of plants (1)	output 1.000 tonnes
COMMUNITY	69	2,9	102	35,8	26	32,2	16	29,1	213	6.077
SWEDEN	2	0,1	42	14,2	25	22,2	25	63,5	95	8.143
FINLAND (2)	-	-	3	2,3	9	13,1	22	84,6	33	4.187
U.S.A.	-	-	87	4,4	55	9,5	147	87,1	289	37.927
CANADA	2	0,1	20	2,9	10	4,4	72	92,6	104	16.258

(1) 1972

(2) chemical pulp

Source: European Confederation of the Pulp, Paper and Board Industries (CEPAC)

Table IX

PLANT SIZE IN THE PULP INDUSTRY

1972

COUNTRY	Less than 5000 tonnes p.a.	5000 - 10000 tonnes p.a.	10000 - 25000 tonnes p.a.	25000 - 50000 tonnes p.a.	50000 - 100000 tonnes p.a.	over 100000 tonnes p.a.	TOTAL
BELGIUM/LUX.	1	1	1	2	-	2	7
DENMARK	-	1	3	-	1	-	5
GERMANY	17	8	10	8	9	3	55
FRANCE	14	3	6	10	8	6	47
IRELAND	-	-	1	-	-	-	1
ITALY (1)	33	10	18	5	6	3	75
NETHERLANDS	4	1	5	4	-	1	16
U.K.	-	-	2	2	2	1	7
COMMUNITY	69	24	47	31	26	16	213

(1) Number of enterprises

Source: European Confederation of the Pulp, Paper and Board Industries (CEPAC)

Table X

PRODUCTION OF PULP FOR PAPER MAKING

1970

COUNTRY	WOOD PULP FOR PAPER MAKING								PULP OF OTHER FIBROUS MATERIALS		TOTAL	
	MECHANICAL		SEMI-CHEMICAL		CHEMICAL							
					SULPHITE		SULPHATE AND SODA					
	000 tonnes	No. of plants (1)	000 tonnes	No. of plants (1)	000 tonnes	No. of plants (1)	000 tonnes	No. of plants (1)	000 tonnes	No. of plants (1)	000 tonnes	No. of plants (1)
BELG./LUX.	165	3	-	-	40	1	135	2	17	1	357	7
DENMARK	7	1	100	2	-	-	-	-	35	2	142	5
GERMANY	914	38	50	1	550	15	-	-	69	1	1.593	55
FRANCE	494	21	167	7	321	7	702	9	121	3	1.805	47
IRELAND	15	1	-	-	-	-	-	-	-	-	15	1
ITALY	528	38	214	14	54	6	68	3	370	25	1.234	86
NETHERLANDS	162	3	26	1	-	-	-	-	284	12	472	16
U.K.	249	4	114	2	69	1	-	-	37	1	469	8
COMMUNITY	2.534	109	671	27	1.034	30	905	14	933	45	6.077	225

(1) 1972

Source: European Confederation of the Pulp, Paper and Board Industries (CEPAC)

Table XI

SIZE OF THE PAPER PLANTS

1972

COUNTRY	No. of firms	less than 1000 tonnes p.a.	1000 - 5000 tonnes p.a.	5000-10000 tonnes p.a.	10000-25000 tonnes p.a.	25000-50000 tonnes p.a.	50000-100000 tonnes p.a.	over 100000 tonnes p.a.	TOTAL	Production 000 tonnes p.a.
BELG./LUX.	21	4	4	4	7	8	2	1	30	783,4
DENMARK	7	-	2	2	3	3	1	-	11	238,9
GERMANY	204	34	65	40	58	34	17	10	258	5.855,1
FRANCE	171	26	60	39	60	31	9	8	233	4.530,0
IRELAND	3	-	-	1	-	3	-	-	4	138,2
ITALY	526	206	196	64	63	32	19	6	586	3.577,5
NETHERLANDS	38	2	3	3	15	14	8	2	47	1.560,8
U.K.	86	7	30	22	44	23	17	9	152	4.337,8
COMMUNITY	1.056	279	360	175	250	148	73	36	1.321	21.021,7

Source: European Confederation of Pulp, Paper and Board Industries (CEPAC)

Table XII

STRUCTURE OF THE PAPER AND BOARD INDUSTRY

1970

COUNTRY	Less than 5000 tonnes p.a.		5000 - 50000 tonnes p.a.		50000 - 100000 tonnes p.a.		over 100000 tonnes p.a.		TOTAL	
	No. of plants (1)	% of output	No. of plants (1)	% of output	No. of plants (1)	% of output	No. of plants (1)	% of output	No. of plants (1)	output 000 tonnes
COMMUNITY	639	5,5	573	51,5	73	25,0	36	18,0	1.321	20.701
SWEDEN	6	0,5	34	17,5	14	19,5	13	62,5	67	4.358
FINLAND	2	0,15	15	9,0	7	12,85	15	78	39	4.260
CANADA	3	0,1	52	9,9	15	10,1	42	79,9	112	11.137

(1) 1972

PRODUCTION & CONSUMPTION OF PULP FOR PAPER MAKING

TABLE XIII

YEAR	BELG/LUX.		DENMARK		GERMANY		FRANCE		IRELAND		ITALY		NETH.		U.K.		COMMUNITY	
	PROD.	CONS	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.
1950	89,6	222,5	0,8	76	901,1	1.079,5	535,0	926,0	1,3	11,6	235,5	418,8	391,5	499,2	167,2	1.631,2	2.322,0	4.924,8
1951	105,5	266,7	1	74	1.014,6	1.195,9	599,0	1.041,0	-	19,8	259,6	396,4	395,0	529,3	206,0	1.726,0	2.580,7	5.249,1
1952	90,9	202,1	2	72	948,1	1.122,0	515,5	938,5	-	18,0	239,4	359,4	370,0	470,1	194,0	1.568,0	2.360,5	4.760,1
1953	97,8	207,8	4	79	1.005,9	1.263,8	591,4	970,9	-	23,1	288,0	477,9	410,6	559,4	163,0	1.806,0	2.550,7	5.387,9
1954	101,2	214,4	4	86	1.181,0	1.458,8	674,0	1.091,9	-	31,0	303,4	528,3	494,4	632,4	195,0	2.037,0	2.953,8	6.079,8
1955	105,0	232,8	11	93	1.219,6	1.572,6	720,8	1.193,1	-	30,8	346,3	593,5	534,9	674,5	193,0	2.202,0	3.130,6	6.592,3
1956	112,5	241,7	14	94	1.266,8	1.645,6	769,4	1.268,6	-	28,2	390,0	673,3	506,2	647,6	136,0	2.169,0	3.193,9	6.768,0
1957	136,9	282,3	15	99	1.293,7	1.726,9	837,0	1.364,1	-	29,3	431,6	715,3	547,6	727,5	141,0	2.094,0	3.402,8	7.038,4
1958	122	265	17	102	1.324	1.756	1.053	1.614	19	43	454	727	492	685	354	2.285	3.835	7.477
1959	139	292	21	106	1.360	1.921	1.162	1.683	20	51	516	872	513	752	363	2.397	4.094	8.074
1960	152	302	24	130	1.409	2.030	1.317	1.945	-	-	566	1.023	546	842	411	2.895	4.425	9.167
1961	151	320	24	119	1.410	2.055	1.352	2.020	-	-	598	1.054	553	828	434	2.799	4.552	9.195
1962	158	332	35	122	1.337	2.031	1.371	2.009	3	3	672	1.192	536	813	415	2.635	4.527	9.137
1963	182	385	45	145	1.289	2.105	1.387	2.182	-	-	704	1.337	564	905	415	2.771	4.586	9.880
1964	188	392	59	139	1.222	2.178	1.453	2.231	14	49	723	1.425	587	993	465	3.158	4.711	10.565
1965	235	391	74	156	1.245	2.171	1.556	2.178	17	42	873	1.646	588	1.048	485	3.134	5.073	10.766
1966	274	449	85	151	1.263	2.212	1.631	2.410	12	38	978	1.846	569	1.080	545	3.225	5.357	11.411
1967	283	461	95	144	1.294	2.274	1.660	2.400	12	38	1.015	2.053	529	1.038	401	2.851	5.294	11.259
1968	322	525	98	160	1.400	2.532	1.601	2.445	12	58	1.157	2.241	537	1.091	449	3.094	5.576	12.146
1969	342	564	120	165	1.510	2.869	1.708	2.722	15	46	1.266	2.536	490	1.099	471	3.090	5.922	13.091
1970	357	611	142	187	1.583	3.118	1.805	2.889	15	55	1.234	2.502	472	1.117	469	3.221	6.077	13.700
1971	356	612	115	111	1.530	2.871	1.815	2.793	16	41	1.159	2.059	389	905	413	2.458	5.773	11.850
1972	405	646	125	138	1.537	3.082	1.894	3.016			1.262		376	1.026				
1973																		

Source : O.E.C.D. The pulp and paper Industry

PRODUCTION & CONSUMPTION OF WOOD PULP FOR PAPER MAKING

TABLE XIV

YEAR	BELG/LUX.		DENMARK		GERMANY		FRANCE		IRELAND		ITALY		NETH.		U.K.		COMMUNITY	
	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.
1950	77,1	210,0	0,8	76,0	798,1	984,7	497,0	885,0	-	11,3	186,7	372,7	89,0	196,7	123,2	1.508,2	1.771,9	4.244,6
1951	93,0	254,2	1,0	74,8	886,2	1.078,7	544,0	980,0	-	19,8	219,0	373,8	95,0	229,3	144,0	1.504,0	1.982,2	4.513,8
1952	80,9	187,2	2,0	72,0	828,2	1.004,5	474,5	890,0	-	18,0	219,4	352,0	100,0	200,1	148,0	1.404,0	1.853,0	4.127,8
1953	85,8	193,0	4,0	77,0	880,7	1.141,7	530,4	904,6	-	23,1	220,0	412,5	99,6	248,4	123,0	1.653,0	1.943,5	4.653,3
1954	94,2	203,8	4,0	84,0	1.045,7	1.325,6	615,0	1.027,5	-	31,0	220,1	451,2	116,4	280,1	143,0	1.843,0	2.238,4	5.246,2
1955	98,0	220,7	5,0	87,0	1.082,1	1.434,2	661,3	1.127,3	-	30,8	235,5	492,1	121,2	290,8	135,0	2.017,0	2.338,1	5.699,9
1956	99,5	223,0	5,0	85,0	1.133,6	1.524,6	701,3	1.197,6	-	28,2	260,6	553,1	127,6	298,2	95,0	2.014,0	2.422,6	5.923,7
1957	121,9	259,8	5,0	89,0	1.155,7	1.588,9	764,5	1.291,3	-	29,3	284,8	577,3	135,0	341,5	115,0	1.976,0	2.581,9	6.153,1
1958	122,0	259,0	6,0	92,0	1.151,0	1.581,0	829,0	1.390,0	19,0	43,0	295,0	575,0	116,0	324,0	115,0	2.031,0	2.653,0	6.295,0
1959	132,0	278,0	10,0	96,0	1.177,0	1.731,0	946,0	1.470,0	20,0	51,0	334,0	697,0	115,0	376,0	130,0	2.145,0	2.864,0	6.844,0
1960	145,0	289,0	12,0	119,0	1.225,0	1.839,0	1.031,0	1.708,0	-	-	364,0	830,0	127,0	446,0	155,0	2.620,0	3.109,0	7.851,0
1961	151,0	315,0	11,0	107,0	1.225,0	1.865,0	1.127,0	1.784,0	-	-	405,0	862,0	130,0	425,0	200,0	2.547,0	3.249,0	7.905,0
1962	158,0	328,0	14,0	102,0	1.167,0	1.859,0	1.140,0	1.775,0	-	-	472,0	990,0	137,0	421,0	200,0	2.407,0	3.288,0	7.882,0
1963	165,0	364,0	24,0	124,0	1.130,0	1.945,0	1.181,0	1.971,0	-	-	493,0	1.174,0	148,0	510,0	200,0	2.535,0	3.341,0	8.623,0
1964	171,0	371,0	35,0	116,0	1.100,0	2.035,0	1.267,0	2.039,0	11,0	49,0	535,0	1.237,0	162,0	589,0	240,0	2.914,0	3.521,0	9.350,0
1965	219,0	370,0	48,0	131,0	1.133,0	2.040,0	1.373,0	1.991,0	12,0	42,0	570,0	1.343,0	173,0	644,0	260,0	2.888,0	3.788,0	9.449,0
1966	252,0	425,0	57,0	124,0	1.166,0	2.094,0	1.455,0	2.226,0	12,0	38,0	638,0	1.504,0	191,0	709,0	320,0	2.974,0	4.091,0	10.004,0
1967	271,0	443,0	67,0	117,0	1.215,0	2.179,0	1.520,0	2.233,0	12,0	38,0	657,0	1.692,0	189,0	705,0	310,0	2.734,0	4.221,0	10.141,0
1968	316,0	515,0	68,0	131,0	1.326,0	2.441,0	1.459,0	2.299,0	12,0	58,0	764,0	1.845,0	207,0	767,0	375,0	2.995,0	4.528,0	11.051,0
1969	335,0	552,0	89,0	135,0	1.426,0	2.767,0	1.587,0	2.592,0	15,0	46,0	882,0	2.143,0	218,0	826,0	422,0	3.019,0	4.974,0	12.080,0
1970	340,0	590,0	107,0	152,0	1.514,0	3.031,0	1.654,0	2.761,0	15,0	55,0	864,0	2.124,0	188,0	832,0	432,0	3.162,0	5.144,0	12.707,0
1971	356,0	609,0	90,0	87,0	1.500,0	2.825,0	1.708,0	2.680,0	16,0	41,0	759,0	1.655,0	162,0	702,0	377,0	2.405,0	4.968,0	11.004,0
1972	405,1	641,9	85,0	99,8	1.534,3	3.065,7	1.797,9	2.910,2			870,8	2.034,3	172,3	828,8	356,7	2.543,2		
1973																		

Source O.E.C.D. The Pulp and Paper Industry

PRODUCTION & CONSUMPTION OF PULP OF OTHER FIBROUS MATERIALS

TABLE XV

1,000 tonnes

YEAR	BELG./LUX		DENMARK		GERMANY		FRANCE		IRELAND		ITALY		NETH.		U.K.		COMMUNITY	
	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.
1950	12,5	12,5	-	-	103,0	94,8	38,0	41,0	1,3	0,3	48,8	46,1	302,5	302,5	44,0	183,0	550,1	680,2
1951	12,5	12,5	-	-	128,4	117,2	55,0	61,0	-	-	40,6	22,6	300,0	300,0	62,0	222,0	598,5	735,3
1952	10,0	14,9	-	-	120,5	117,5	41,0	48,5	-	-	20,0	17,4	270,0	270,0	46,0	164,0	507,5	632,3
1953	12,0	14,8	-	2,0	125,2	122,1	51,0	66,3	-	-	68,0	55,4	311,0	311,0	40,0	153,0	607,2	734,6
1954	7,0	10,6	-	2,0	135,3	133,2	59,0	64,4	-	-	83,3	77,1	378,0	352,3	52,0	194,0	714,6	833,6
1955	7,0	12,1	6,0	6,0	137,5	138,4	59,5	65,8	-	-	110,8	101,4	413,7	383,7	58,0	185,0	792,5	892,4
1956	13,0	18,7	9,0	9,0	133,2	121,0	67,1	71,0	-	-	129,4	120,2	370,6	349,4	41,0	155,0	771,3	844,3
1957	15,0	22,5	10,0	10,0	138,0	138,0	72,5	72,8	-	-	146,8	138,0	412,6	386,0	26,0	118,0	820,9	865,3
1958	-	6,0	11,0	10,0	173,0	175,0	224,0	224,0	-	-	159,0	152,0	376,0	361,0	239,0	254,0	1.182,0	1.182,0
1959	7,0	14,0	11,0	10,0	183,0	190,0	216,0	213,0	-	-	182,0	175,0	398,0	276,0	233,0	252,0	1.230,0	1.230,0
1960	7,0	13,0	12,0	11,0	184,0	191,0	236,0	237,0	-	-	202,0	193,0	419,0	396,0	256,0	275,0	1.316,0	1.316,0
1961	-	5,0	13,0	12,0	185,0	190,0	235,0	236,0	-	-	193,0	192,0	423,0	403,0	234,0	252,0	1.283,0	1.290,0
1962	-	4,0	21,0	20,0	170,0	172,0	231,0	234,0	3,0	3,0	200,0	202,0	399,0	392,0	215,0	228,0	1.239,0	1.255,0
1963	17,0	21,0	21,0	21,0	159,0	160,0	206,0	211,0	-	-	211,0	213,0	416,0	395,0	215,0	236,0	1.245,0	1.257,0
1964	17,0	21,0	24,0	23,0	122,0	143,0	185,0	192,0	3,0	-	168,0	188,0	425,0	404,0	225,0	244,0	1.190,0	1.215,0
1965	16,0	21,0	26,0	25,0	112,0	131,0	133,0	187,0	5,0	-	303,0	303,0	415,0	404,0	225,0	246,0	1.285,0	1.317,0
1966	22,0	24,0	28,0	27,0	97,0	118,0	176,0	184,0	-	-	340,0	342,0	378,0	371,0	225,0	251,0	1.266,0	1.317,0
1967	17,0	18,0	28,0	27,0	79,0	95,0	150,0	167,0	-	-	358,0	361,0	340,0	333,0	91,0	117,0	1.073,0	1.118,0
1968	6,0	10,0	30,0	29,0	74,0	91,0	141,0	146,0	-	-	393,0	396,0	330,0	324,0	74,0	99,0	1.048,0	1.095,0
1969	7,0	12,0	31,0	30,0	84,0	102,0	121,0	130,0	-	-	384,0	393,0	272,0	273,0	49,0	71,0	948,0	1.011,0
1970	17,0	21,0	35,0	35,0	69,0	87,0	121,0	128,0	-	-	370,0	378,0	284,0	285,0	37,0	59,0	933,0	993,0
1971	-	3,0	25,0	24,0	30,0	46,0	107,0	113,0	-	-	400,0	404,0	207,0	203,0	36,0	53,0	805,0	845,0
1972	-	4,1	40,0	38,4	2,9	16,5	96,3	105,6			391,0		203,2	196,7				
1973																		

Source : O.E.C.D. The Pulp and Paper Industry

SOURCES OF COMMUNITY IMPORTS OF WOODPULP FOR PAPER MAKING

TABLE XVI

1.000 tonnes

YEAR	SWEDEN	FINLAND	NORWAY	SWEDEN, FINLAND NORWAY	U.S.A.	CANADA	N. AMERICA	OTHERS	TOTAL
1958	1.569,5	878,7	516,1	2.964,3	160,5	213,9	374,4	333,1	3.671,8
1959	1.689,1	920,4	530,1	3.139,6	233,1	252,2	485,3	350,8	3.975,7
1960	1.924,3	1.053,6	647,3	3.625,2	438,1	326,1	764,2	254,8	4.644,2
1961	1.863,4	1.056,4	623,6	3.543,4	429,2	343,6	772,8	388,1	4.704,3
1962	1.885,9	1.059,3	623,5	3.568,7	374,8	321,7	696,5	377,0	4.642,2
1963	2.213,5	1.256,4	640,8	4.110,7	396,6	387,1	783,7	439,0	5.333,4
1964	2.406,1	1.371,9	740,5	4.518,5	416,9	466,5	883,4	453,3	5.855,2
1965	2.241,1	1.339,2	735,2	4.315,5	400,6	549,6	950,2	442,0	5.707,2
1966	2.475,1	1.415,1	737,9	4.628,1	387,7	541,7	929,4	490,1	6.047,6
1967	2.342,0	1.325,9	690,0	4.357,9	470,4	646,6	1.117,0	496,4	5.971,3
1968	2.418,5	1.367,8	816,7	4.603,0	550,1	855,5	1.405,6	566,7	6.575,3
1969	2.623,0	1.481,0	825,2	4.929,2	629,3	993,5	1.622,8	628,6	7.180,6
1970	2.691,6	1.328,1	884,2	4.903,9	979,5	1.177,8	2.157,3	555,9	7.617,1
1971	2.224,2	922,1	705,1	3.867,4	621,8	1.135,6	1.757,4	460,2	6.085,0
1972									
1973									

Source : O.E.C.D. The Pulp and Paper Industry

PRODUCTION & CONSUMPTION OF PAPER & BOARD

TABLE XVII

1.000 tonnes

YEAR	BELG/LUX.		DENMARK		GERMANY		FRANCE		IRELAND		ITALY		NETH.		U.K.		COMMUNITY	
	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.	PROD.	CONS.
1950	296,4	364,8	103,4	237,4	1.565,1	1.602,1	1.304,0	1.190,0	31,5	86,2	485,9	502,7	631,0	496,9	2.605,0	3.073,0	7.022,3	7.552,3
1951	325,9	369,1	103,0	224	1.804,9	1.838,0	1.561,0	1.504,5	35,5	87,1	572,0	535,0	676,0	519,3	2.724	3.354	7.602,3	8.431,0
1952	257,0	310,8	100,0	193	1.695,0	1.830,9	1.232,0	1.226,0	27,4	66,0	589,4	589,4	680,0	400,8	2.346	2.681	6.826,8	7.297,9
1953	279,3	367,0	106	232	1.968,9	2.179,2	1.427,0	1.413,4	32,0	64,5	667,2	712,5	697,5	541,7	2.686	3.142	7.864,4	8.552,3
1954	308,0	415,3	121	274	2.301,1	2.570,6	1.627,0	1.606,4	63,7	89,0	738,3	774,1	780,8	632,3	3.079	3.767	9.018,9	10.130,7
1955	319,0	457,9	137	287	2.514,9	2.856,9	1.793,5	1.825.3	75,2	106,6	812,7	841,1	821,4	666,3	3.297	4.170	9.770,7	11.211,1
1956	335,7	445,0	149	293	2.686,7	3.047,8	1.941,8	2.101,2	70,0	102,8	926,8	946,0	804,3	698,7	3.282	4.052	10.196,3	11.686,5
1957	382,7	512,3	149	300	2.843,0	3.345,0	2.105,0	2.284,0	69,0	97,2	1.055	1.111	886,5	765,6	3.357	4.165	10.857,2	12.580,1
1958	363,0	476,0	165	339	2.919,0	3.510,0	2.186,8	2.326,0	67,0	95,0	1.095	1.160	856,0	750	3.492	4.428	11.143	13.084,0
1959	378,0	511,0	168	374	3.111,0	3.843,0	2.336,0	2.339,0	67,0	103,0	1.263	1.329	940,0	860	3.648	4.579	11.911	13.938
1960	411	575	183	406	3.434	4.396,0	2.616	2.636	85	132	1.467	1.554	1.021	979	4.063	5.322	13.280	16.080
1961	435	631	188	431	3.524	4.597,0	2.744	2.818	85	132	1.600	1.802	1.050	1.021	4.021	5.332	13.647	16.759
1962	443	651	188	458	3.609	4.810,0	2.822	2.988	104	153	1.769	1.976	1.041	1.058	3.954	5.316	13.930	17.490
1963	458	723	187	458	3.740	5.025	3.002	3.242	87	140	1.923	2.204	1.119	1.152	4.138	5.587	14.664	18.531
1964	509	781	196	515	4.024	5.522	3.128	3.461	91	166	2.044	2.267	1.232	1.226	4.401	6.075	15.625	20.013
1965	515	809	204	534	4.236	5.988	3.165	3.529	85	147	2.207	2.352	1.307	1.291	4.542	6.117	16.262	20.767
1966	548	838	217	561	4.318	6.079	3.451	3.421	58	158	2.524	2.600	1.357	1.362	4.534	6.279	17.027	21.798
1967	556	821	204	560	4.414	5.881	3.528	4.000	58	158	2.851	2.937	1.334	1.347	4.436	6.375	17.391	22.079
1968	654	928	220	559	4.741	6.674	3.612	4.100	94	176	3.043	3.135	1.505	1.587	4.670	6.762	19.539	23.931
1969	723	1.034	241	641	5.181	7.453	3.907	4.666	99	206	3.438	3.547	1.608	1.760	4.937	7.129	20.224	26.435
1970	772	1.044	234	670	5.516	7.641	4.134	4.797	95	199	3.451	3.556	1.596	1.833	4.903	7.176	20.701	26.916
1971	771	1.109	217	623	5.578	7.655	4.227	4.962	100	195	3.288	3.427	1.498	1.714	4.336	6.754	20.015	26.439
1972	733	1.141	239	694	5.855	8.013	4.530	5.391	138	252	3.578	3.688	1.561	1.813	4.338	7.429	21.022	28.167
1973	(828)	(1.265)	(239)	(769)	(6.364)	(8.500)	(4.770)	(5.728)	(142)	(235)	(3.964)	(4.185)	(1.752)	(1.922)	(4.617)	(7.645)	(22.676)	(30.293)

Sources : O.E.C.D. The Pulp and Paper Industry
Data for 1973 : European Confederation of Pulp, Paper and Board Industries

SOURCES OF COMMUNITY IMPORTS OF PAPER & BOARD

TABLE XVIII

1.000 tonnes

YEAR	SWEDEN	FINLAND	NORWAY	SWEDEN, FINLAND NORWAY	U.S.A.	CANADA	N. AMERICA	OTHERS	TOTAL
1958	622,3	605,3	205,9	1.433,5			623,6	230,9	2.288,0
1959	661,3	647,4	217,0	1.525,7			644,5	212,2	2.382,4
1960	666,5	856,8	266,5	1.989,8			823,9	213,9	3.036,6
1961	949,7	1.064,4	287,6	2.301,7	342,1	552,2	894,3	223,7	3.419,7
1962	1.064,8	1.214,5	314,7	2.594,0	350,3	605,3	955,6	234,4	3.784,0
1963	1.202,5	1.344,4	377,8	2.924,7	384,2	620,1	1.004,3	267,8	4.195,8
1964	1.420,9	1.458,8	446,3	3.326,0	505,8	648,0	1.153,8	279,4	4.759,2
1965	1.414,7	1.563,9	463,6	3.442,2	579,9	605,5	1.185,4	304,2	4.931,8
1966	1.531,4	1.686,1	473,6	3.691,1	568,6	683,5	1.252,1	304,9	5.248,1
1967	1.515,4	1.578,8	478,5	3.573,7	604,1	715,8	1.319,9	307,4	5.201,0
1968	1.742,2	1.741,6	557,7	4.041,5	804,0	783,0	1.587,0	344,8	5.973,3
1969	1.928,2	1.956,3	680,3	4.564,8	1.008,3	866,7	1.875,0	420,3	6.860,1
1970	2.013,9	1.991,2	666,9	4.672,0	986,0	856,3	1.842,8	460,0	6.974,8
1971	2.135,9	2.105,1	633,4	4.874,4	1.087,5	766,9	1.854,3	463,8	7.192,5
1972									
1973									

Source O.E.C.D. The Pulp and Paper Industry

EXPORTS OF WOODPULP FOR PAPER MAKING BY MAIN EXPORTING COUNTRIES

TABLES XIX
1.000 tonnes

YEAR	SWEDEN	FINLAND	NORWAY	SWEDEN, FINLAND NORWAY	U.S.A.	CANADA	N. AMERICA
1950	1.726,0	1.013,0	444,0	(a) 3.183,0			
1951	1.594,0	1.072,0	459,0	(a) 3.125,0			
1952	1.335,0	797,0	440,0	(a) 2.572,0			
1953	1.812,0	903,0	504,0	(a) 3.219,0			
1954	1.859,0	1.031,0	572,0	(a) 3.462,0			
1955	1.935,0	1.168,0	575,0	(a) 3.378,0	504	1.847,6	
1956	2.170,0	1.180,0	600,0	(a) 3.950,0		1.878,6	
1957	2.079,0	1.175,0	594,3	(a) 3.849,3		1.821,5	
1958	2.057,7	1.202,3	586,5	3.828,5			
1959	2.317,0	1.306,1	598,7	4.189,2			
1960	2.498,5	1.437,5	702,0	4.597,8		2.124,8	
1961	2.366,8	1.444,3	671,7	4.454,2	687,7	2.337,2	984,1
1962	2.480,0	1.476,3	682,8	4.600,3		2.430,2	
1963	2.833,8	1.717,4	689,8	5.193,6		2.683,2	
1964	3.117,4	1.849,4	823,9	5.750,5		2.906,1	
1965	2.951,4	1.863,3	797,7	5.566,8	850,6	3.175,3	1.678,1
1966	3.270,8	1.976,0	796,8	5.966,2	905,1	3.309,1	1.785,4
1967	3.194,7	1.900,9	745,2	5.734,6	1.015,4	3.505,8	2.108,2
1968	3.255,9	1.963,5	871,8	5.959,4	1.156,9	4.094,8	2.563,7
1969	3.436,1	1.986,2	891,3	6.126,0	1.281,1	4.915,2	2.970,2
1970	3.429,3	1.842,8	965,2	6.064,7	1.993,2	4.777,9	3.909,6
1971	3.007,3	1.323,3	774,7	4.992,6	1.289,9	4.701,4	3.092,7
1972							
1973							

(a) Including trade between these countries
Source : O.E.C.D. The Pulp and Paper Industry

EXPORTS OF PAPER AND BOARD BY MAIN EXPORTING COUNTRIES

TABLE XX

1.000 tonnes

YEAR	SWEDEN	FINLAND	NORWAY	SWEDEN, FINLAND NORWAY	U.S.A.	CANADA	N. AMERICA
1950	726	594	325	(a) 1.645,0			
1951	742	701	332,1	(a) 1.775,1			
1952	561	632	261,3	(a) 1.454,3			
1953	713	751	309,6	(a) 1.773,6			
1954	770	849	356,2	(a) 1.975,2			
1955	825	1.010	340,9	(a) 2.175,9	389	5.499	
1956	921	1.098	362,6	(a) 2.381,6		5.713	
1957	962	1.239	397	(a) 2.598,0		5.551	
1958	959,7	1.260,7	390,6	2.605,2			
1959	1.036,4	1.326,6	432,0	2.787,4			
1960	1.255,7	1.573,8	477,0	3.298,7		5.953,6	
1961	1.356,4	1.891,3	496,4	3.735,5	899,1	5.866,5	1.409,9
1962	1.460,2	2.076,4	489,7	4.017,2		5.818,5	
1963	1.616,8	2.226,7	562,2	4.393,3		5.909,8	
1964	1.846,0	2.424,4	639,4	4.891,6		6.477,6	
1965	1.847,0	2.613,5	645,1	5.080,4	1.468,8	6.800,3	2.574,6
1966	2.006,4	2.852,1	667,3	5.486,1	1.706,4	7.530,5	2.883,0
1967	2.001,9	2.772,3	749,0	5.476,5	1.760,3	7.298,0	2.994,8
1968	2.357,1	2.970,9	847,5	6.115,6	2.135,7	7.299,5	3.533,0
1969	2.663,3	3.296,6	964,0	6.871,1	2.287,9	8.011,3	3.999,8
1970	2.780,1	3.408,6	977,4	7.104,2	2.389,5	8.019,6	4.278,7
1971	2.858,5	3.501,6	934,1	7.209,1	2.660,6	7.864,8	4.280,8
1972							
1973							

Source : O.E.C.D. The Pulp and Paper Industry

ANNEX I

Analysis of the flow of papermaking materials in European countries in 1970

Most paper and paperboard is made from pulpwood. But an analysis of the market in the three main products - wood pulp and paper - is not sufficient to provide an understanding of the flow pattern of the materials, culminating in the paper and paperboard consumed; the following points have also to be taken into consideration:

- The large quantities of sawdust and offcuts and other waste from the timber industry which can be used as pulpwood.

- Requirements for pulpwoods of all kinds for the manufacture of chipboard or fibreboard.

- The recyclability of a major proportion of the paper and paperboard consumed (waste paper), almost exclusively for the manufacture of new paper and paperboard (the use of waste paper in fibreboard manufacture can be disregarded).

- The use of other fibrous materials such as straw or bagasse.

- The relatively small, but not inconsiderable, pulp requirements of the chemical and textile industries.

It is therefore useful to have a set of tables setting out the quantities of pulpwood, fibreboard and chipboard, waste paper, wood pulp and other fibrous materials, and paper and paperboard produced, exported, imported and consumed. Tables I to IV present figures for these elements in respect of all Community countries and the non-acceding EFTA countries.

From the ratio between certain of the figures in these tables it is possible to determine the apparent conversion factors relating a source material to the processed product. These factors can be used to express 66

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the values of papermaking materials in terms of their paper-and-paperboard equivalent, i.e., the average quantity of paper and paperboard that can be produced from the corresponding quantities of materials.

It then becomes possible to plot against the same scale of values the relative magnitude of indigenous resources, trade, and consumption of the various papermaking materials circulating in a country. These values have been worked out as percentages of the total papermaking materials and paper products in circulation in 1970 (see Tables V and VI). Charts 1 and 2 show the same values as areas proportional to the actual quantities.

Charts 1 and 2 respectively show in schematic form, for the Community, and all Community and EFTA States in the aggregate, the major trade flows of papermaking materials and paper-and-paperboard products, ranging from pulpwood, waste paper, other fibrous materials and the various sources of imports, to paper and paperboard, pulp, textiles, board, and exports to destinations outside the group of countries in question.

On the basis of the values in Tables V and VI it is possible to work out the overall self-sufficiency of the sector, which is determined by the ratio between the quantities of raw materials of internal origin and the quantities of all products consumed; this presupposes that under raw materials are included pulpwood of forest origin, recoverable waste from the timber industry, recyclable waste paper and pulp extracted from other fibrous materials; and also that consumed products include: paper and paperboard, fibreboard, chipboard and pulp for chemical purposes. The interactions between the various raw materials and the products made from them are such that it is not possible to distinguish, among quantities of incoming materials, those which will be used solely for the manufacture of a given product. The self-sufficiency factors thus derived for each country are given at the end of Table VI.

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If imported products and those made from internally produced raw materials are apportioned pro rata requirements, it is possible to calculate step by step a self-sufficiency factor for all paper and paperboard consumed without taking into consideration other products such as fibreboard and chipboard. The self-sufficiency factor calculated in this way is 42.6% for the Community and 81.5% for the Community and EFTA States in the aggregate.

TABLE I - 1 Sources and use of pulpwood 1970

(1.000 m^3)

	Denmark	Germany	France	Ireland	Italy	Netherl.	Belg/ Lux.	U.K.	Community	Austria	Finland	Norway	Portugal	Sweden	Switzer-land	Total
Forest production of pulpwood (round & split)	124,0	5.746,0	8.341,0	70,0	1.695,0	355,0	490,0	1.002,0	18.823,0	1.780,0	19.8[illegible],0	3.739,0	2.000,0	[illegible]	930,0	80.096,0
Recovery of saw-mill waste	989,7	2.803,4	2.592,5	222,2	1.755,0	160,0	100,5	152,8	[illegible].777,1	1.062,1	4.373,9	893,4	-	7.022,0	253,[illegible]	23.182,6
TOTAL PRODUCTION OF PULPWOOD	1.113,7	9.549,4	10.933,5	292,2	3.451,0	515,0	590,5	1.154,8	27.900,1	2.842,1	24.212,9	4.632,4	2.000,0	40.907,0	1.183,[illegible]	[illegible].278,6
Imports of pulpwood (round & split):																
from the enlarged Community (1)	-	534,2	19,7	n.d.	155,1	46,8	610,2	2,2	(1.376,5)	4,4	-	17,3	1,0	-	88,[illegible]	6.408,3
from E.F.T.A. non-members (2)	-	191,3	74,5	n.d.	135,9	0,5	5,6	12,1	420,9	50,8	348,5	3.419,0	-	421,7	336,[illegible]	
from North America (3)	-	0,2	321,0	n.d.	143,5	179,3	-	131,0	777,0	-	-	-	-	-	-	777,0
from Eastern Europe (4)	-	1.045,9	814,4	n.d.	893,8	127,3	423,3	136,7	3.442,4	1.037,9	1.351,1	51,9	-	67,1	55,[illegible]	6.016,0
from other sources	-	-	12,5	n.d.	348,6	-	-	0,0	380,1	79,0	-	-	8,5	-	-	456,6
total	[illegible]	1.772,6	1.243,6	n.d.	1.676,9	353,7	1.048,1	291,8	5.009,4	1.172,1	1.699,6	3.499,1	9,5	488,8	480,[illegible]	7.248,6
Imports of saw-mill waste :																
from the enlarged Community (1)	-	398,[illegible]	25,5	-	67,9	43,5	285,5	-	(8[illegible]2,3)	12,4	0,2	59,5	-	21,1	108,6	1.854,0
from E.F.T.A. non-members (2)	[illegible],3	159,1	0,8	-	58,5	0,1	0,2	-	219,0	1,1	2,5	213,4	-	202,3	11,6	
from other sources	0,1	22,1	4,9	-	2,3	1,6	123,9	129,7	284,0	84,2	629,8	-	-	-	-	988,6
total	0,4	580,0	32,2	-	128,7	45,3	389,6	129,7	503,8	97,7	632,5	272,9	-	223,4	120,[illegible]	998,6
TOTAL IMPORTS OF PULPWOOD	0,4	2.352,6	1.275,8	-	1.805,6	399,0	1.437,7	420,7	5.512,0	1.269,8	2.332,1	3.772,0	9,5	712,2	601,[illegible]	8.244,2
TOTAL AVAILABLE PULPWOOD	1.114,1	11.902,0	12.209,3	292,2	5.256,6	914,0	2.028,2	1.575,5	33.113,1	4.111,8	26.546,0	8.404,0	2.009,5	41.518,2	1.784,2	[illegible].526,8
Exports of pulpwood (round & split):																
to the enlarged Community (1)	120,4	87,2	980,2	2,2	0,4	163,2	22,9	n.d.	(1.276,5)	53,8	14,4	0,4	106,8	224,4	21,[illegible]	6.486,3
to the E.F.T.A. non-members (2)	27,2	88,2	17,3	-	4,9	-	0,7	n.d.	138,3	23,8	563,5	118,9	1,3	3.843,1	-	
to the other sources	-	-	-	n.d.	-	-	-	n.d.	-	3,1	29,1	-	41,0	31,0	-	104,2
total	147,9	175,4	997,5	2,2	5,3	163,2	23,5	n.d.	138,3	80,7	607,0	119,3	149,1	4.098,5	21,[illegible]	104,2
Exports of saw-mill waste :																
to the enlarged Community (1)	245,1	48,8	346,7	-	0,3	128,5	33,3	0,6	(802,3)	56,7	-	-	-	110,3	52,0	1.854,0
to the E.F.T.A. non-members (2)	80,4	71,4	38,5	-	11,4	0,1	-	-	201,8	11,6	122,1	80,2	-	215,9	1,1	
to other sources	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
total	325,5	120,2	385,2	-	11,7	128,6	33,3	0,6	201,8	68,3	122,1	80,2	-	326,2	53,1	-
TOTAL EXPORTS OF PULPWOOD	474,1	295,6	1.382,7	2,2	17,0	289,8	56,8	0,6	340,1	149,0	729,1	199,5	149,1	4.424,7	74,2	104,2
Consumption of pulpwood :																
for woodpulp	285,0	5.841,0	9.181,9	85,0	3.270,7	451,1	1.091,4	1.097,0	20.203,1	3.083,6	24.720,4	7.483,1	1.679,8	34.523,1	1.043,9	92.735,0
for fibreboard	15,0	845,0	759,7	55,0	163,2	98,3	134,8	74,0	1.944,8	183,4	590,1	426,2	39,9	2.052,7	89,7	5.344,8
for particle board	360,0	5.120,4	1.965,0	150,0	1.805,7	74,8	745,3	403,9	10.625,1	695,9	498,4	295,8	140,7	520,7	576,4	13.342,8
TOTAL CONSUMPTION OF PULPWOOD	640,0	11.806,4	10.925,6	290,0	5.239,6	524,2	1.971,3	1.574,8	32.773,0	3.962,9	25.818,9	8.204,9	1.860,4	37.096,5	1.710,0	[illegible].422,8

(1) Denmark, Germany, France, Ireland, Italy, Netherlands, B.L.E.U. United Kingdom

(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland

(3) Canada, United States

(4) The State economies in Europe (including USSR, excluding Yugoslavia)

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TABLE 1 - 2 Sources and use of waste paper: 1970

(1.000 tonnes)

	Denmark	Germany	France	Ireland	Italie	Netherlands	B.L.E.U.	United Kingdom	Enlarged Community	Austria	Finland	Norway	Portugal	Sweden	Switzerland	Total
Production of waste paper	121,0	2.292,[illegible]	1.319,[illegible]	18,0	728,0	725,0	318,0	2.062,0	7.581,0	173,0	173,0	79,0	6,0	350,0	297,0	8.659,0
Imports of waste paper																
from the enlarged Community (1)	4,5	258,9	123,3	16,3	117,4	69,1	22,7	20,6	(632,8)	37,8	-	1,8	1,2	16,5	30,6	(854,7)
from E.F.T.A. non-member (2)	11,0	51,7	12,5	-	109,6	0,3	-	1,1	186,2	11,2	3,8	25,1	-	3,7	3,7	
from North America (3)	-	4,5	0,2	0,1	38,9	5,2	0,2	0,8	49,7	0,5	-	-	-	-	-	50,2
from Eastern Europe (4)	-	4,8	-	-	11,4	1,2	-	3,8	21,0	49,7	23,5	-	-	0,1	-	94,3
from other sources	0,2	0,3	0,8	-	6,7	0,3	0,1	0,2	8,6	-	-	-	-	-	0,3	8,9
TOTAL IMPORTS OF WASTE PAPER	15,7	320,0	136,8	16,4	284,0	76,1	23,0	26,3	265,5	99,2	27,3	27,0	1,2	20,3	34,8	153,4
TOTAL AVAILABLE WASTE PAPER	136,7	2.612,0	1.455,8	34,4	1.012,0	801,1	339,0	2.088,3	7.846,5	272,2	200,3	106,0	7,2	370,3	331,8	8.812,4
Export of waste paper																
to the enlarged Community (1)	22,1	129,0	50,1	4,5	0,1	216,5	150,6	60,7	(632,0)	12,4	3,4	3,8	-	50,4	117,0	(854,7)
to the E.F.T.A. non-member (2)	15,1	55,4	5,8	-	-	3,3	1,2	7,4	88,2	0,1	0,8	3,7	-	39,8	3,9	
to other sources	11,2	6,1	26,0	-	0,2	9,1	5,6	26,8	86,2	0,3	0,4	1,8	-	8,6	-	87,4
TOTAL EXPORT OF WASTE PAPER	48,4	188,7	81,8	4,5	0,3	228,9	157,8	94,9	174,4	12,8	4,5	8,6	-	98,0	120,9	87,4
APPARENT CONSUMPTION OF WASTE PAPER	86,3	2.422,3	1.373,9	29,8	1.011,7	572,2	180,4	1.993,4	7.672,1	259,4	195,7	97,4	7,2	272,3	210,9	8.735,0

Sources and use of pulp: 1970

(1.000 tonnes)

	Denmark	Germany	France	Ireland	Italie	Netherlands	B.L.E.U.	United Kingdom	Enlarged Community	Austria	Finland	Norway	Portugal	Sweden	Switzerland	Total
Production of wood pulp	107	1.733	1.797	15	935	188	340	432	5.538	933,0	6.222,0	2.209,0	420,0	8.143,0	268,0	23.733,0
Production of other pulp	35	68	121	-	370	284	17	37	933	-	-	-	7,0	-	-	940,0
TOTAL PRODUCTION OF PULP	142	1.802	1.918	15	1.306	472	357	469	6.471	933,0	6.222,0	2.209,0	427,0	8.143,0	268,0	24.673,0
Imports of pulp																
from the enlarged Community (1)	-	108,8	82,8	0,1	51,1	58,1	21,4	43,7	(376)	8,1	0,3	0,6	2,5	0,4	12,6	(5.415,9)
from E.F.T.A. non-member (2)	122,0	974,5	553,7	23,5	741,7	453,8	238,1	2.135,5	5.553	40,1	5,7	155,7	25,5	23,5	212,6	
from North America (3)	1,5	577,5	373,2	24,7	493,9	172,4	119,5	717,4	2.435,2	22,0	1,1	0,5	1,2	2,9	15,8	2.479,5
from Eastern Europe (4)	-	29,1	32,6	-	40,2	7,8	3,8	17,8	131,4	6,9	0,1	-	-	-	-	138,4
from other sources	-	23,7	24,2	-	39,2	5,1	4,1	216,3	312,6	2,2	-	-	0,2	-	1,0	316,0
TOTAL IMPORTS OF PULP	123,5	1.718,7	1.329,5	48,3	1.376,1	697,2	386,0	3.130,9	8.432,2	80,1	7,2	156,8	29,4	27,1	242,0	2.937,9
TOTAL AVAILABLE PULP	285,5	3.518,7	3.237,5	63,3	2.682,1	1.169,2	743,0	3.599,9	14.903,2	1.013,1	6.229,2	2.365,8	456,4	8.178,1	510,0	27.606,9
Exports of pulp																
to the enlarged Community (1)	74,1	57,8	115,3	8,0	1,9	17,2	97,2	4,5	(376)	88,2	1.425,5	934,2	263,3	2.822,5	19,3	(6.416,9)
to the E.F.T.A. non-member (2)	4,9	9,4	9,1	-	0,9	2,3	0,4	0,5	24,5	17,1	82,9	30,2	16,6	312,4	4,2	
to other sources	4,2	1,4	45,4	-	1,5	0,2	-	2,2	55,8	29,4	550,1	60,1	40,0	526,0	0,1	1.271,6
TOTAL EXPORTS OF PULP	83,2	65,5	170,8	8,0	4,3	19,7	97,5	7,2	90,4	134,7	2.058,5	1.024,5	319,9	3.668,9	23,6	1.271,6
Apparent consumption of pulp for paper and board making	182,3	3.105,4	2.888,3	55,3	2.499,0	1.129,8	609,7	3.223,3	13.673,1	795,8	4.103,8	1.299,8	126,6	4.425,7	471,4	24.886,0
Apparent consumption of dissolving paper	-	347,7	179,4	-	179,8	39,7	35,7	369,4	1.140,7	82,6	57,1	41,5	9,9	63,5	15,0	1.439,3
APPARENT CONSUMPTION OF PULP	172,3	3.453,1	[illegible]	55,3	2.577,[illegible]	1.169,5	645,4	3.592,7	14.822,[illegible]	[illegible]	4.160,7	1.341,3	136,5	4.509,2	485,4	26.325,3

(1) Denmark, Germany France, Ireland, Italie, Netherlands, B.L.E.U., United Kingdom
(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland
(3) Canada, United States
(4) The State economies in Europe (including USSR, excluding Yugoslavia)

TABLE 1 - 1 Sources and use of pulpwood 1970

(1.000 m^3)

	Denmark	Germany	France	Ireland	Italy	Netherl.	Belg/ Lux.	U.K.	Community	Austria	Finland	Norway	Portugal	Sweden	Switzer-land	Total
Forest production of pulpwood (round & split)	124,0	5.745,0	8.341,0	70,0	1.695,0	355,0	490,0	1.002,0	18.823,0	1.780,0	19.840,0	3.739,0	2.000,0	32.984,0	930,0	80.086,0
Recovery of saw-mill waste	989,7	2.803,4	2.592,5	222,2	1.756,0	160,0	100,5	152,8	8.777,1	1.062,1	4.373,9	893,4	-	7.823,0	253,1	23.182,6
TOTAL PRODUCTION OF PULPWOOD	1,113,7	9.549,4	10.933,5	792,2	3.451,0	515,0	590,5	1.154,8	27.900,1	2.842,1	24.213,9	4.632,4	2.000,0	40.807,0	1.183,1	103.278,6
Imports of pulpwood (round & split):																
from the enlarged Community (1)	-	534,2	18,2	n.d.	155,1	46,6	619,2	2,2	(1.376,5)	4,4	-	17,3	1,0	-	88,8	6.406,3
from E.F.T.A. non-members (2)	-	191,3	74,5	n.d.	135,9	0,5	5,6	13,1	420,9	50,8	348,5	3.419,9	-	421,7	336,9	
from North America (3)	-	0,2	323,0	n.d.	143,5	179,3	-	131,0	777,0	-	-	-	-	-	-	777,0
from Eastern Europe (4)	-	1.046,9	614,4	n.d.	893,8	127,3	423,3	136,7	3.442,4	1.037,6	1.351,1	51,9	-	67,1	55,6	6.816,0
from other sources	-	-	12,5	n.d.	348,6	-	-	9,0	369,1	79,0	-	-	8,5	-	-	456,6
total	[illegible]	1.772,6	1.243,6	n.d.	1.675,9	353,7	1.048,1	291,8	5.009,4	1.172,1	1.699,6	3.490,1	9,5	488,8	480,8	7.249,6
Imports of saw-mill waste :																
from the enlarged Community (1)	-	398,8	29,5	-	67,9	43,5	265,5	-	(892,3)	12,4	0,2	59,5	-	21,1	108,8	1.054,0
from E.F.T.A. non-members (2)	0,3	159,1	0,8	-	58,5	0,1	0,2	-	219,0	1,1	2,5	213,4	-	202,3	11,8	
from other sources	0,1	22,1	4,9	-	2,3	1,8	123,9	129,7	284,0	84,2	629,8	-	-	-	-	888,6
total	0,4	580,0	32,2	-	128,7	45,3	389,6	129,7	503,0	97,7	632,5	272,9	-	223,4	120,6	988,6
TOTAL IMPORTS OF PULPWOOD	0,4	2.352,6	1.275,8	-	1.805,6	399,0	1.437,7	420,7	5.513,0	1.269,8	2.332,1	3.772,0	9,5	712,2	601,1	8.248,2
TOTAL AVAILABLE PULPWOOD	1,114,1	11.902,0	12.208,3	292,2	5.256,6	914,0	2.028,2	1.575,5	33.113,1	4.111,9	26.546,0	8.404,8	2.009,5	41.519,2	1.784,2	118.526,8
Exports of pulpwood (round & split):																
to the enlarged Community (1)	120,4	87,2	880,2	2,2	0,4	163,2	22,8	n.d.	(1.376,5)	53,8	14,4	0,4	106,8	224,4	21,8	6.486,3
to the E.F.T.A. non-members (2)	27,2	88,2	17,3	-	4,9	-	0,7	n.d.	138,3	23,8	563,5	118,9	1,3	3.843,1	-	
to the other sources	-	-	-	n.d.	-	-	-	n.d.	-	3,1	29,1	-	41,0	31,0	-	104,2
total	147,5	175,4	897,5	2,2	5,3	163,2	23,5	n.d.	138,3	80,7	607,0	119,3	149,1	4.098,5	21,8	104,2
Exports of saw-mill waste :																
to the enlarged Community (1)	246,1	48,8	346,7	-	0,3	128,5	33,3	0,6	(802,3)	56,7	-	-	-	110,3	52,0	1.054,0
to the E.F.T.A. non-members (2)	80,4	71,4	38,5	-	11,4	0,1	-	-	201,8	11,6	122,1	80,2	-	215,9	1,1	
to other sources	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
total	326,5	120,2	385,2	-	11,7	128,9	33,3	0,6	201,8	68,3	122,1	80,2	-	326,2	53,1	-
TOTAL EXPORTS OF PULPWOOD	474,1	295,6	1.382,7	2,2	17,0	299,8	56,8	0,6	340,1	149,0	729,1	199,5	149,1	4.424,7	74,2	104,2
Consumption of pulpwood :																
for woodpulp	285,0	5.841,0	6.101,9	85,0	3.270,7	451,1	1.091,4	1.097,0	20.203,1	3.083,8	24.720,4	7.483,1	1.679,8	34.521,1	1.043,9	82.735,0
for fibreboard	15,0	645,0	758,7	55,0	163,2	98,3	134,6	74,0	1.944,8	193,4	590,1	426,2	39,9	2.052,7	89,7	5.344,8
for particle board	360,0	5.120,4	1.865,0	150,0	1.805,7	74,8	745,3	403,9	10.625,1	685,3	498,4	295,6	140,7	520,7	576,4	13.342,8
TOTAL CONSUMPTION OF PULPWOOD	640,0	11.606,4	10.725,6	290,0	5.239,5	624,2	1.971,3	1.574,9	32.773,0	3.962,5	25.818,9	8.204,9	1.860,4	37.094,5	1.710,0	101.422,6

(1) Denmark, Germany, France, Ireland, Italy, Netherlands, B.L.E.U. United Kingdom

(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland

(3) Canada, United States

(4) The State economies in Europe (including USSR, excluding Yugoslavia)

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TABLE 1 - 2 Sources and use of waste paper: 1970

(1.000 tonnes)

	Denmark	Germany	France	Ireland	Italie	Netherlands	B.L.E.U.	United Kingdom	Enlarged Community	Austria	Finland	Norway	Portugal	Sweden	Switzerland	Total
Production of waste paper	121,0	2.292,[illegible]	1.319,0	18,0	729,0	725,0	316,0	2.062,0	7.581,0	173,0	173,0	79,0	6,0	350,0	297,0	8.659,0
Imports of waste paper																
from the enlarged Community (1)	4,5	258,9	123,3	18,3	117,4	69,1	22,7	20,6	(832,8)	37,8	-	1,9	1,2	16,5	30,8	(854,7)
from E.F.T.A. non-member (2)	11,0	51,7	12,5	-	109,8	0,3	-	1,1	186,2	11,2	3,8	25,1	-	3,7	3,7	
from North America (3)	-	4,5	0,2	0,1	39,9	5,2	0,2	0,8	49,7	0,5	-	-	-	-	-	50,2
from Eastern Europe (4)	-	4,8	-	-	11,4	1,2	-	3,8	21,0	49,7	23,5	-	-	0,1	--	94,3
from other sources	0,2	0,3	0,8	-	8,7	0,3	0,1	0,2	8,8	-	-	-	-	-	0,3	9,9
TOTAL IMPORTS OF WASTE PAPER	15,7	320,0	138,8	18,4	254,0	76,1	23,0	26,3	265,5	99,2	27,3	27,0	1,2	20,3	34,8	153,4
TOTAL AVAILABLE WASTE PAPER	136,7	2.612,0	1.455,8	36,4	1.012,0	801,1	339,0	2.088,3	7.848,5	272,2	200,3	106,0	7,2	370,3	331,8	8.812,4
Export of waste paper																
to the enlarged Community (1)	22,1	128,0	50,1	4,5	0,1	216,5	150,8	60,7	(632,8)	12,4	3,4	3,0	-	50,4	117,0	(854,7)
to the E.F.T.A. non-member (2)	15,1	55,4	5,8	-	-	3,3	1,2	2,4	88,2	0,1	0,8	3,7	-	38,0	3,9	
to other sources	11,2	6,3	26,0	-	0,2	9,1	5,8	26,8	86,2	8,3	0,4	1,9	-	8,8	-	97,4
TOTAL EXPORT OF WASTE PAPER	48,4	189,7	81,9	4,5	0,3	229,9	158,8	94,9	174,4	12,8	4,5	8,6	-	98,0	120,9	97,4
APPARENT CONSUMPTION OF WASTE PAPER	88,3	2.422,3	1.373,9	29,9	1.011,7	572,2	180,4	1.993,4	7.872,1	259,4	195,7	97,4	7,2	272,3	210,9	8.715,8

Sources and use of pulp: 1970

(1.000 tonnes)

	Denmark	Germany	France	Ireland	Italie	Netherlands	B.L.E.U.	United Kingdom	Enlarged Community	Austria	Finland	Norway	Portugal	Sweden	Switzerland	Total
Production of wood pulp	107	1.733	1.787	15	935	188	340	432	5.538	933,0	6.222,0	2.209,0	420,0	8.143,0	268,0	23.733,0
Production of other pulp	35	89	121	-	370	284	17	37	933	-	-	-	7,0	-	-	940,0
TOTAL PRODUCTION OF PULP	142	1.802	1.908	15	1.306	472	357	469	6.471	933,0	6.222,0	2.209,8	427,0	8.143,0	268,0	24.673,0
Imports of pulp																
from the enlarged Community (1)	-	108,8	82,8	0,1	91,1	58,1	21,4	43,7	(378)	8,1	0,3	0,6	2,5	0,4	12,6	(5.415,9)
from E.F.T.A. non-member (2)	122,[illegible]	974,5	853,7	23,5	741,7	453,8	238,1	2.135,9	5.553	40,1	5,7	155,7	25,5	23,8	212,6	
from North America (3)	1,5	[illegible],5	323,2	24,7	493,9	172,4	119,9	717,4	2.435,2	22,[illegible]	1,1	0,5	1,2	2,9	15,0	2.479,5
from Eastern Europe (4)	-	28,1	32,8	-	40,2	7,8	3,8	17,9	131,4	6,9	0,1	-	-	-	-	131,4
from other sources	-	23,7	24,2	-	39,2	5,1	4,1	216,3	312,6	2,2	-	-	0,2	-	1,0	316,0
TOTAL IMPORTS OF PULP	123,5	1.715,7	1.329,5	48,3	1.378,1	687,2	386,0	3.130,9	8.432,2	80,1	7,2	156,8	29,4	27,1	242,0	2.933,9
TOTAL AVAILABLE PULP	265,5	3.518,7	3.237,5	63,3	2.692,1	1.169,2	743,0	3.599,9	14.903,2	[illegible].013,1	6.229,2	[illegible].365,6	456,4	8.170,1	510,0	27.806,9
Exports of pulp																
to the enlarged Community (1)	74,1	57,8	115,3	8,0	1,9	17,2	97,2	4,5	(376)	88,2	1.425,5	934,2	263,3	2.822,5	19,3	(6.416,9)
to the E.F.T.A. non-member (2)	4,9	4,4	9,1	-	0,9	2,3	0,4	0,5	24,5	17,1	82,9	30,2	16,6	312,4	4,2	
to other sources	4,2	1,4	45,4	-	1,5	0,2	-	2,2	55,9	29,4	550,1	60,1	40,0	526,0	0,1	1.271,6
TOTAL EXPORTS OF PULP	83,2	65,5	170,0	8,0	4,3	19,7	97,6	7,2	90,4	134,7	2.058,5	1.024,5	319,9	3.660,9	23,6	1.271,6
Apparent consumption of pulp for paper and board making	182,3	3.105,4	2.888,1	55,3	2.499,0	1.199,8	609,7	3.223,3	13.873,1	795,8	4.103,6	[illegible].289,8	128,6	4.425,7	471,4	24.886,0
Apparent consumption of dissolving paper	-	347,7	179,4	-	179,8	39,7	35,7	369,4	1.149,7	82,8	57,1	41,5	9,9	83,5	15,0	1.439,3
APPARENT CONSUMPTION OF PULP	182,3	3.453,1	[illegible]	55,3	2.577,[illegible]	1.149,5	545,4	3.592,7	[illegible]	[illegible]	4.[illegible]	[illegible].331,3	138,5	4.509,2	[illegible]	[illegible].325,3

(1) Denmark, Germany France, Ireland, Italie, Netherlands, B.L.E.U., United Kingdom
(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland
(3) Canada, United States
(4) The State economies in Europe (including USSR, excluding Yugoslavia)

TABLE I - 3 Sources and use of paper and board, 1970

(In 1000 tonnes)

	Denmark	Germany	France	Ireland	Italy	Netherl.	Belg./Lux.	U.K.	Community	Austria	Finland	Norway	Portugal	Sweden	Switzerland	Total
Production of paper and board:																
from pulp	154,5	3.335,8	2.897,5	68,1	2.540,5	1.081,0	609,6	3.108,9	13.796,0	783,5	4.093,9	1.333,3	194,5	4.112,9	541,2	24.965,3
from waste paper (5)	79,5	2.180,1	1.236,5	26,9	910,5	515,0	162,4	1.794,1	6.905,0	233,5	176,1	87,1	6,5	245,1	189,8	7.963,7
TOTAL PRODUCTION OF PAPER AND BOARD	234,0	5.516,8	4.134,0	95,0	3.451,0	1.596,0	772,0	4.903,0	20.701,8	1.017,8	4.268,0	1.421,0	201,0	4.358,0	731,0	32.[illegible]
Imports of paper and board:																
from the enlarged Community (1)	20,4	594,6	302,5	21,0	61,6	293,9	326,8	103,0	(1.723,8)	31,8	3,1	7,2	9,4	33,5	36,4	(7.[illegible],7)
from EFTA non-members (2)	417,6	1.694,1	559,1	61,4	138,4	390,9	241,1	1.439,8	4.942,5	50,6	1,9	28,8	63,5	31,9	722,9	
from North America (3)	17,9	393,5	153,3	31,5	145,4	87,3	58,6	954,7	1.842,8	1,7	-	4,3	0,5	5,4	2,8	1.[illegible],5
from Eastern Europe (4)	8,5	36,6	15,0	0,1	6,9	9,1	15,7	5,9	97,8	17,4	6,3	0,5	-	0,6	0,1	[illegible]
from other sources	0,4	12,9	11,6	0,2	39,4	46,0	0,7	4,5	95,7	0,7	-	-	2,1	-	0,4	[illegible]
TOTAL IMPORTS OF PAPER AND BOARD	464,8	2.731,7	1.042,1	114,2	371,7	827,2	642,9	2.508,8	6.978,8	102,2	11,3	41,9	75,5	71,4	263,0	2.[illegible],1
TOTAL AVAILABLE PAPER AND BOARD	698,8	8.247,7	5.175,1	209,2	3.822,7	2.423,2	1.414,9	7.411,8	27.679,8	1.379,2	4.271,3	1.462,8	276,5	4.429,4	994,0	34.[illegible],1
Exports of paper and board:																
to the enlarged Community (1)	7,0	401,8	261,1	24,8	94,2	542,2	332,7	60,0	(1.723,8)	251,3	1.991,2	666,9	7,4	2.013,9	11,8	(7.[illegible],7)
to EFTA non-members (2)	19,7	53,3	5,2	-	11,9	10,5	6,0	15,3	121,9	65,1	129,8	38,4	-	155,8	11,4	
to other sources	3,1	111,9	116,7	-	172,4	51,0	17,3	127,2	599,6	203,8	1.287,6	272,1	3,5	610,4	5,7	2.[illegible],7
TOTAL EXPORTS OF PAPER AND BOARD	29,8	567,8	383,0	24,8	278,5	603,7	356,0	202,5	721,5	520,2	3.408,6	977,4	10,9	2.780,3	28,9	2.[illegible],7
APPARENT CONSUMPTION OF PAPER AND BOARD	569,0	7.680,7	4.793,1	184,4	3.544,2	1.819,5	1.058,9	7.208,5	26.958,3	599,0	862,7	485,4	265,6	1.649,3	965,1	31.785,4

(1) Denmark, Germany, France, Ireland, Italia, Netherlands, B.L.E.U., United Kingdom

(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland

(3) Canada, United States

(4) The State economies in Europe (including USSR, excluding Yugoslavia)

(5) One tonne of waste paper equals 0,9 tonnes of paper

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TABLE I - 4 Sources and use of fibreboard, 1970

(in 1000 tonnes)

	Denmark	Germany	France	Ireland	Italy	Netherl.	Belg./Lux.	U.K.	Community	Austria	Finland	Norway	Portugal	Sweden	Switzer-land	Total
Production of fibreboard	5,0	269,7	260,4	19,5	72,0	33,0	70,0	38,0	767,6	94,3	241,3	140,0	34,0	717,0	36,6	2.030,8
Imports of fibreboard:																
from the enlarged Community (1)	1,3	53,2	14,7	0,6	7,5	55,1	24,7	18,2	(175,3)	n.d.	n.d.	-	n.d.	-	1,6	(657,2)
from EFTA non-members (2)	57,3	79,9	3,3	1,1	18,1	86,6	13,5	207,5	467,3	n.d.	n.d.	3,3	n.d.	0,6	9,1	
from North America (3)	-	8,4	1,0	0,1	0,1	0,8	2,8	8,9	22,1	n.d.	n.d.	-	n.d.	0,5	0,2	22,8
from Eastern Europe (4)	9,2	9,8	8,7	1,2	-	11,8	5,3	31,0	70,0	n.d.	n.d.	-	n.d.	0,1	-	70,1
from other sources	-	9,2	3,6	-	1,2	3,8	3,5	23,1	43,6	n.d.	n.d.	-	n.d.	-	0,1	43,7
TOTAL IMPORTS OF FIBREBOARD	72,8	160,5	24,3	3,0	26,9	157,3	49,8	288,7	603,0	n.d.	n.d.	3,3	n.d.	1,2	11,0	136,6
TOTAL AVAILABLE FIBREBOARD	67,8	430,2	284,7	22,5	98,9	190,3	119,8	326,7	1.370,6	94,3	241,3	151,3	34,0	718,2	47,6	2.175,4
Exports of fibreboard:																
to the enlarged Community (1)	0,1	26,4	75,1	72,8	4,5	15,3	40,6	0,5	(175,3)	31,0	89,1	27,7	10,6	307,0	1,9	(657,2)
to EFTA non-members (2)	-	1,2	0,1	-	0,2	0,1	-	-	1,6	5,3	1,4	0,2	-	6,1	-	
to other sources	0,1	2,3	5,0	-	1,8	0,7	5,0	3,9	18,8	9,6	60,0	5,5	18,5	83,4	0,9	196,7
TOTAL EXPORTS OF FIBREBOARD	0,2	29,9	80,2	12,8	6,5	16,1	45,6	4,4	20,4	45,9	150,5	33,4	29,1	396,5	2,8	196,7
APPARENT CONSUMPTION OF FIBREBOARD	72,6	400,3	204,5	9,7	92,4	174,2	74,2	322,3	1.350,2	48,4	90,8	117,9	4,9	321,7	44,8	1.978,7

Sources and use of particle board, 1970

(in 1000 m^3)

	Denmark	Germany	France	Ireland	Italy	Netherl.	Belg./Lux.	U.K.	Community	Austria	Finland	Norway	Portugal	Sweden	Switzer-land	Total
Production of particle board	225,9	3.777,8	1.042,9	95,0	920,0	50,0	530,0	280,7	6.922,3	479,1	380,4	210,8	120,0	389,0	356,0	8.856,8
Imports of particle board:																
from the enlarged Community (1)	6,3	104,8	259,6	0,2	5,5	223,7	78,1	66,1	(744,3)	3,1	-	-	-	8,2	2,6	(1.170,2)
from EFTA non-members (2)	43,6	21,3	1,3	1,5	1,4	2,6	0,4	216,0	288,1	6,3	-	26,0	-	36,3	54,5	
from North America (3)	-	-	-	-	-	-	0,5	0,2	0,7	-	-	-	-	-	-	0,7
from Eastern Europe (4)	4,5	5,1	0,6	2,1	0,4	0,1	-	19,8	32,6	-	-	-	-	6,4	-	39,0
from other sources	-	-	-	1,2	-	10,0	-	2,6	13,8	-	0,1	-	-	-	-	13,9
TOTAL IMPORTS OF PARTICLE BOARD	54,4	131,2	261,5	5,0	7,3	236,4	79,0	304,7	335,2	9,4	0,1	26,0	-	50,9	57,1	53,6
TOTAL AVAILABLE PARTICLE BOARD	280,3	3.909,0	1.304,4	100,0	927,3	286,4	609,0	585,4	7.257,5	488,5	380,5	236,8	120,0	439,9	413,1	8.910,4
Exports of particle board:																
to the enlarged Community (1)	15,6	285,0	59,2	39,4	41,7	49,4	253,3	0,7	(244,3)	11,5	124,4	30,5	30,6	70,7	20,4	(1.170,2)
to EFTA non-members (2)	2,0	5,2	0,1	-	2,2	0,4	0,1	3,9	13,9	53,2	25,6	18,5	2,9	17,4	6,3	
to other sources	1,8	12,4	29,4	0,1	29,5	0,3	13,4	-	86,9	51,8	30,4	0,2	21,0	3,8	4,0	198,1
TOTAL EXPORTS OF PARTICLE BOARD	19,4	302,6	88,2	39,5	73,4	50,1	266,8	4,6	100,8	115,5	180,4	49,2	54,5	91,9	30,7	198,1
APPARENT CONSUMPTION OF PARTICLE BOARD	260,9	3.606,4	1.215,7	60,5	953,9	236,3	342,2	580,8	7.156,2	372,0	200,1	187,6	65,5	348,0	382,4	8.712,3

(1) Denmark, Germany, France, Ireland, Italie, Netherlands, B.L.E.U., United Kingdom

(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland

(3) Canada, United States

(4) The State economies in Europe (including USSR, excluding Yugoslavia)

TABLE 1 - 5 Sources of paper materials available in 1970

(Figures are expressed as percentages of the total)

	Denmark	Germany	France	Ireland	Italy	Netherl.	Belg./Lux.	U.K.	Community	Austria	Finland	Norway	Portugal	Sweden	Switzerland	Total
Production from:																
round and split wood	3,5	19,6	27,8	5,6	10,7	4,5	7,5	4,5	15,7	32,1	72,5	39,6	84,5	75,7	19,6	48,2
saw-mill waste	28,1	8,1	8,7	17,8	11,1	2,0	1,5	0,7	7,3	19,1	16,0	9,5	-	18,0	5,3	13,8
waste paper	9,8	18,8	17,9	6,0	14,2	20,3	13,9	22,0	20,6	9,4	2,3	2,5	0,6	3,3	19,7	18,4
non-wood materials	2,5	0,7	1,8	-	8,2	8,7	0,8	0,5	2,8	-	-	-	1,2	-	-	2,2
TOTAL PRODUCTION FROM RAW MATERIALS OF INTERNAL ORIGIN	43,7	47,2	56,2	29,4	44,2	35,5	23,7	27,7	46,4	60,6	90,8	51,6	86,3	97,0	44,0	82,7
Imports in any form:																
from the enlarged Community (1)	2,6	32,1	9,4	13,3	6,6	20,3	34,0	2,5	-	4,8	0,1	1,2	1,6	0,6	10,8	-
from EFTA nonmembers (2)	50,9	27,0	21,9	33,8	23,0	29,3	23,9	44,9	34,1	7,1	1,4	46,4	11,2	2,1	43,2	-
from North America (3)	1,7	10,5	8,3	22,8	15,7	10,4	6,7	20,8	13,9	1,5	0,2	0,2	0,3	0,1	1,5	10,9
from Eastern Europe (4)	1,8	3,8	3,4	0,5	6,9	2,6	9,4	1,3	3,9	24,2	7,7	0,7	-	0,2	1,2	5,1
from other sources	-	8,4	8,6	8,2	3,6	1,9	0,3	2,0	1,7	1,8	-	-	0,6	-	0,1	1,3
Total imports in the form of:																
round and split wood	-	5,2	4,2	-	10,6	4,5	16,0	1,3	4,2	21,1	6,2	37,1	8,4	1,1	10,1	4,3
saw-mill waste	-	1,7	-	-	0,8	0,6	5,9	0,6	8,4	1,7	2,3	2,9	-	0,5	2,5	0,6
waste paper	1,2	2,6	1,9	5,4	5,5	2,1	1,0	0,3	0,7	5,4	0,4	0,8	0,1	0,2	2,2	0,3
pulp	8,7	16,8	20,1	21,9	30,3	21,1	19,8	35,8	25,6	4,8	0,1	5,6	4,9	0,3	19,8	6,9
paper and board	38,5	24,9	15,7	42,1	0,1	25,8	31,4	29,8	21,0	6,2	0,2	1,5	8,3	0,7	18,8	4,9
fibreboard	6,1	1,1	0,2	0,6	0,4	5,9	1,5	2,5	1,3	-	-	0,1	-	-	0,6	0,2
particle board	2,4	6,5	1,7	0,6	0,7	4,5	1,7	2,0	0,4	0,2	-	0,4	-	0,2	2,0	0,1
TOTAL IMPORTS OF PAPER MATERIALS	56,9	52,8	43,8	70,6	55,8	64,5	76,3	72,3	53,6	39,4	9,2	48,4	13,7	3,0	56,0	17,3
TOTAL AVAILABLE PAPER MATERIALS (in 1000 tonnes paper and board equivalent)	1201,8	10973,2	6633,7	271,7	4608,8	3208,7	2047,1	8421,4	33216,1	1654,9	6848,2	2857,3	908,8	9547,1	1400,5	42572,8

(1) Denmark, Germany, France, Ireland, Italie, Netherlands, B.L.E.U., United Kingdom

(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland

(3) Canada, United States

(4) The State economies in Europe (including USSR, excluding Yugoslavia)

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TABLE I - 6 **Use of available paper materials in 1976**

(Figures are expressed as percentages of the total)

	Denmark	Germany	France	Ireland	Italie	Nether-lands	B.L.E.U.	United Kingdom	Enlarged Community	Austria	Finland	Norway	Portugal	Sweden	Switzer-land	Total
Consumption as:																
paper and board	55,5	70,0	72,3	68,0	76,9	56,7	51,7	85,6	81,2	36,2	12,6	17,8	29,2	8,7	69,0	74,8
fibreboard	6,2	2,8	2,0	2,1	1,3	6,5	2,2	2,8	2,9	1,8	0,8	3,6	0,2	2,1	2,3	3,1
particle board	11,8	14,2	7,6	7,6	10,6	4,5	7,3	3,8	9,1	9,6	1,0	2,8	3,2	1,7	13,0	7,9
dissolving pulp	-	3,4	2,7	-	3,9	1,2	1,8	4,2	3,5	4,9	0,8	3,5	1,7	8,8	1,2	3,4
TOTAL CONSUMPTION OF PRODUCTS	73,5[2]	90,4[2]	84,6	77,7	92,7	68,9	63,0	96,4[2]	96,7[2]	52,5	15,2	24,9	34,3	21,3	85,5	89,2
Exportation in any form:																
to the enlarged Community (1)	10,7	7,0	11,9	22,3	2,7	28,7	35,0	1,4	-	24,5	51,3	58,3	51,8	52,1	12,3	-
to the E.F.T.A. non-member (2)	6,3	1,5	0,5	-	0,4	0,5	0,4	0,3	1,8	7,2	5,8	4,9	3,0	14,4	1,6	-
to other countries	1,5	1,1	3,8	-	4,2	1,9	1,6	1,9	2,3	15,8	27,7	11,9	10,9	12,2	0,6	10,8
Total exports in the form of:																
round and split wood	4,2	0,5	3,3	0,2	0,1	2,7	0,3	-	0,1	1,5	2,2	1,3	6,3	9,4	0,4	0,1
saw-mill waste	9,3	0,3	1,3	-	0,1	1,6	0,5	-	0,2	1,2	0,4	0,8	-	0,8	1,1	-
pulp	5,9	0,6	2,6	3,6	0,1	0,6	4,8	0,1	0,2	8,8	30,0	36,8	54,1	35,6	1,9	3,0
waste paper	3,6	1,6	1,1	1,5	-	6,4	7,0	7,0	0,5	8,7	0,1	0,3	-	0,9	7,8	0,2
paper and board	2,5	5,2	5,8	9,1	6,8	10,8	17,4	2,4	2,2	31,4	49,8	34,2	1,2	29,1	2,7	7,8
fibreboard	0,1	0,2	0,8	2,9	0,1	0,6	1,3	0,1	-	1,7	1,4	1,8	1,4	2,6	0,1	0,3
particle board	0,9	1,2	0,5	5,0	0,9	1,8	5,7	-	0,1	3,0	0,9	0,7	2,7	0,3	1,1	0,2
TOTAL EXPORTS	26,5	9,6	15,4	22,3	7,3	31,1	37,0	3,6	3,3	47,5	84,8	75,1	65,7	78,7	14,5	10,8
LEVEL OF SELF-SUFFICIENCY (Production as a percentage of consumption)	58,7	52,2	66,4	37,8	47,6	51,4	37,7	28,7	48,1	115,4	587,2	207,4	251,0	456,0	51,5	92,6

(1) Denmark, Germany, France, Ireland, Netherlands, B.L.E.U., United Kingdom
(2) Austria, Finland, Norway, Portugal, Sweden, Switzerland

ANNEX II

COMMON CUSTOMS TARIFF APPLICABLE TO PULP AND PAPER

A. PAPERMAKING PULP ("Pulp derived by mechanical or chemical means from any fibrous vegetable material").

The 3% duty in the Tariff is applied only by Germany to certain categories of pulp. Protocol No 12 to the Act of Accession provides that the duty on subheading No 47.01 A II shall be totally suspended according to a timetable to be determined. Until the date of total suspension of the duty, the Member States are authorized to open nil duty tariff quotas.

The quotas bound under the GATT are as follows:

- 170 000 metric tons of mechanical wood pulp (ex 47.01 II);
- 1 935 000 metric tons of chemical wood pulp (ex 47.01 II).

As part of the renegotiations on the basis of Article XXIV/6 of the GATT the Community has offered to reduce the duty on sulphite pulp to 0% in two stages:

- 1.5% at 1 January 1975;
- 0% at 1 January 1976.

Other pulps will be at 0% at 1 January 1975.

In 1971 the Community's suppliers of wood pulp for papermaking were:

Sweden	2,240,200 t.
Canada	1,135,600 t.
Finland	922,100 t.
Norway	705,100 t.
United States	621,800 t.
Portugal	234,800 t.
Other countries	225,400 t.
TOTAL	6,085,000 t.

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B. PAPER AND PAPERBOARD

The customs duty entered for most papers and paperboards not further processed is 12%.

1. Under the agreements with the non-member EFTA countries this duty will be reduced according to the following timetable:

	Bulk grade paper at 12%	Other papers and converted products
1/1/1974	11%	90% of the duty at 1/1/1972
1/1/1975	10.5%	85% " " " " "
1/1/1976	10%	80% " " " " "
1/7/1977	8%	65% " " " " "
1/1/1979	6%	50% " " " " "
1/1/1981	4%	35% " " " " "
1/1/1983	2%	20% " " " " "
1/1/1984	0%	0% " " " " "

In the case of certain products which are exported in large quantities by the trading partner in question, this reduction is linked with a system of ceilings permitting the full duty to be restored at the request of a Member State or of the Commission in the event of a ceiling being exceeded.

Ireland is observing a different timetable and may apply nil duty quotas in respect of certain products. The United Kingdom and Denmark are introducing duties according to the following timetable:

	Bulk grade paper at 12%	Other papers and converted products
1/1/1974	3%	25% of the duty at 1/1/1972
1/1/1975	4.5%	37.5% " " "
1/1/1976	6%	50% " " "
1/7/1977	8%	65% " " "

Thereafter the timetable is the same as above.

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The United Kingdom and Denmark may apply nil duty quotas up to a certain limit which is different for each product and with the quantity increasing at 5% a year from 1975.

2. As part of the renegotiations on the basis of Article XXIV/6 of the GATT the Community has offered to make a concession for Kraft paper and paperboard (48.01 C II):

Present duty:	12%
1/1/1975	11%
1/1/1976	10.5%
1/7/1977	10%
1/1/1979	9%

3. The only Community tariff quota in the field of paper and paperboard covers newsprint.

At present a quantity of 625 000 metric tons is bound under the GATT. As part of the renegotiation of Article 24/VI of the GATT, the Community has undertaken to raise this to 1 500 000 metric tons.

For 1974 the Community quota has been fixed at 3 053 000 metric tons. Protocol No 13 to the Act of Accession provides that each year an autonomous nil duty Community tariff quota shall be opened when it has been established that all possibilities of supply on the internal market of the Community will be exhausted during the period for which the quota is opened.

In 1971 the Community's newsprint suppliers were:

Finland	750 300 metric tons
Sweden	494 900 " "
Canada	423 200 " "
Norway	337 200 " "
Austria	52 700 " "
Other countries	31 400 " "
TOTAL	2 089 700 metric tons

ANNEX III

SYSTEMS OF AID TO THE PULP, PAPER AND PAPERBOARD INDUSTRY AND FOR AFFORESTATION IN THE COMMUNITY

1. F.R. of GERMANY

Official aid has been available since 1968 in the form of Government guarantees for investments for the modernisation and restructuring of pulp mills. The Commission decided on the 17.7.1968 to raise no objections to this scheme being put into operation. During 1970, guarantees to a total of 125 DM were granted. Since then no use has been made of the provision. Initially, subsidies were also planned but so far none have been granted and no budgetary provision exists at the present time.

2. FRANCE

a) In France an aid programme, progressively modified, has existed since 1958. At first aid was given for the production of pulp, for paper and forestry research and for afforestation. As from 1971 grants towards pulp production were suspended, and the funds thus made available have been mostly directed towards aid for purification plant in the chemical and semi-chemical pulp sector.

The aid programme is financed by a levy on paper and paperboard products of 0.70% on French products and those coming from third countries, and of 0.30% on paper and paperboard imports from other member States. The levy amounts to some 30 m. Fs annually.

b) In the agreement reached with industry in 1972, the French Government made provision for the following aid in the field of pollution control:

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- ECELPA (Environment, Cellulose and Paper); interest free loans amounting to 20%;

- State Budget; subsidies amounting to 10%;
- Water Authorities; loans or subsidies amounting to 50%.

c) It should be not[illegible] receives 25% of the levy raised. Water Authorities are mainly financed by fees levied on those companies responsible for the pollution.

The Commission on 26.2.74 decided not to proceed further with the examination, under Article 93 paragraph 2 EEC, of the aid and its financement by means of a special levy. For the aid for water purification plant, not financed by a levy, the Commission decided to raise no objection.

As far as newsprint is concerned the S.P.P.P. (Société Professionnelle des Papiers de Presse) is responsible for the purchase of imported paper, and ensures that prices of French and imported products are equalized. This mechanism is an advantage for French newsprint producers since it gives them a guaranteed market at a known price.

3. <u>ITALY</u>

In Italy, aid is granted by the E.N.C.C. (Ente Nazionale per la Cellulosa e per la Carta) in the form of grants to newsprint consumers.

The ENCC also carries out research in the paper and forestry field and administers afforestation grants.

The ENCC draws its resources from two levies, one of 3% on paper, and paperboard, and the other of 1 Lit/kg on chemical pulp.

The Commission decided, on the 15 September 1972 to open the procedure provided for in Article 93, paragraph 2, EEC, in respect of these aids. Discussions with the Italian Government are about to be concluded which will enable the Commission to close the examination.

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