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THE SCIENTIFIC AND TECHNICAL STRATEGY OF THE COMMUNITY

Status of implementation of the Framework Programme
and consideration for the preparation of its revision

COM(85) 140 final

Introduction

In recent years a number of important agreements or decisions on science and technology have been reached in the Community.

First of all the Framework programme for Community scientific and technical activities was adopted for the period 1984-1987. To implement it, a number of decisions were taken on the JRC multiannual programme 1984-1987 (700 million ECU), funds for demonstration projects on energy (265 million ECU, 1983-85), the ESPRIT programme (750 million ECU) and more recently eight multiannual programmes : fusion, radiation protection, radioactive waste, reactor safety,⁽¹⁾ biotechnology, stimulation, BRITE and non-nuclear energy (1.225 million ECU for all these programmes).

Although these decisions and agreements show that the value of Community R&D and its vital role in the implementation of new Community policies have been recognized, they do not always match up to the scope of, nor respect the balances between the scientific and technical objectives proposed by the Commission and approved by the Council and the Parliament with the adoption of the Framework programme.

In the Commission's view, the objectives - defined in the Framework programme - are still the priority objectives at Community level. Europe's scientific and technological development is too important an issue to allow of anything short of a common and forceful policy, even taking account of the present financial constraints.

(1) Included in the JRC programme

Because of the importance of these subjects, the Commission included them in the basic themes of its communication "Strengthening the technological base and competitiveness of industry" on which it is asking the European Council meeting in Brussels on 29 March 1985 to take a stance.

Following similar lines, this paper - which covers Community scientific and technical activities without attempting to deal with the Commission's innovation policy and the range of measures to be considered in order to strengthen Europe's technological base - suggests to the Member States that they start discussions without delay (before reviewing the Framework programme) :

- on current progress in implementing the Framework programme,
- on some important data that could help in the review.

I. Progress made in implementing the Framework programme 1984-1987

After Parliament and the Economic and Social Committee had given favourable opinions, the Council in its Resolution of 25 July 1983 approved the principle of successive Framework programmes and adopted the priority scientific and technical objectives and the selection criteria for projects to be undertaken in 1984-1987.

The Council was unanimously in favour of the spirit, balances and method presented in that Commission proposal (global strategy incorporating all Community R,D&D activities, overall political choices specifying the priorities and scope of the projects to be launched, weighting between scientific and technical objectives, regular opportunities for the necessary redeployment and change of emphasis in the research effort, etc). In adopting the proposal, the Council clearly demonstrated its determination to develop a far-reaching common R,D&D policy. As the Community debate on own resources and their allocation was still in progress, it did not, however take a decision on the total funding of the Framework programme. This was estimated to be 3750 Mio ECUS, at 1982 value, an estimate of which the Council took note in its resolution of 25 July 1983.

Where does the Community stand today in the implementation of its scientific and technical strategy? At 31 March 1985, counting all the R,D&D programmes in progress or recently decided, it appears that activities under the Framework Programme 1984-87 have now attained a total of 2.685 Million ECU (1982 value).⁽¹⁾

(1) See Annex 1: analysis of the implementation of the Framework programme for Community scientific and technical activities 1984-87.

This total becomes 2952 Mio ECUS if one includes the programmes formally proposed by the Commission.

The following table shows, item by item, the options of the 1984-87 Framework Programme and the extent of its current achievement compared with the corresponding situations in 1982.

It shows:

- a) The programmes of which the period of implementation covers, even partly, the period of validity of the Framework Programme.
- b) The actions to which an annual appropriation was allocated.
- c) The programmes formally proposed by the Commission.

STATE OF IMPLEMENTATION OF THE FRAMEWORK PROGRAMME
END MARCH 1985

OPTIONS	Framework Prog 1984-1987		Status end March 1985						
			Decided & Annual Actions (a + b)			Decided annual & proposed actions (a + b + c)			
	MioECUS 82	%	MioECUS 82	%	Utilisat %	MioECUS 82	%	Utilisat %	%
- Promoting agricultural competitiveness	130	3.5	38.9	1.5	30	44.3	1.5	34	1.9
- Promoting industrial competitiveness	1060	28.2	932.6	34.7	88	972.6	32.9	91.7	16.8
- Improving the management of raw materials	80	2.1	30.2	1.1	38	36	1.2	45	1.4
- Improving the management of energy resources	1770	47.2	1317.3	49.1	74	1475.1	50.0	83	65.4
- Reinforcing development aid	150	4.0	39.9	1.5	27	79.8	2.7	53	0.7
- Improving living and working conditions	385	10.3	265.2	9.9	69	280.7	9.5	73	9.75
- Improving the efficacy of the Community's scientific and technical potential	85	2.3	43.4	1.6	51	43.4	1.5	51	0
- Horizontal activities	90	2.4	16.9	0.6	19	20.1	0.7	22	4
Total Framework Programme	3750	100	2684.4	100	72	2952.0	100	79	100

(1) The executed budget for 1985 and the proposed budget, 2nd draft, were taken into account here for the year 1984; for the years 1986 and 1987, provisional commitments were taken into account.

If one takes account only of the actions decided under a) and b), the table puts into evidence the following major facts:

- In absolute terms no goal has as yet reached the financial aim set in the Framework programme.
- In relative terms :
 - three goals have exceeded a utilization rate of two-thirds of the financial indications (promoting industrial competitiveness: 88 %, improving the management of energy resources: 74 %, and improving living and working conditions: 69 %). These three goals together account for 94 % of the funds already committed,
 - improving the effectiveness of the Community's scientific and technical potential has reached a rate of 51 % and improving the management of raw materials 38 %,
 - the other three goals (promoting agricultural competitiveness, stepping up development aid and horizontal activities) have not even reached one-third of the sums indicated.

The adaptation of the level of financing, as proposed by the Commission, of the actions formally submitted for examination by the Council and the Parliament, does not bring any significant change in terms of relative balance between the options, but ensures for some of them (raw materials, energy, development) a higher percentage for their implementation.

This snapshot of the degree of implementation of the Framework Programme will obviously change over the next two years as decisions are taken by the Council on proposals submitted by the Commission (demonstration projects in the areas of energy and telecommunications) or about to be submitted (environment/climatology and raw materials/materials).

In addition to these proposals there will be reviews in 1986 of seven programmes recently decided by the Council (fusion, biotechnology, stimulation, etc) and new activities in areas such as transport, agriculture, fishing/aquaculture and food.

Even if all these new proposals and programme reviews remain within the limits of the objectives and financial indications of the Framework programme, it is clear that it will not be possible to carry out this programme fully nor to attain its balances.

So far as the weightings to be chosen within each goal of the Framework programme are concerned it would seem that there is a certain amount of distortion, and that this occasionally reaches significant proportions⁽¹⁾.

(1) See Annex I where a more detailed analysis is given.

By way of illustration, it should be noted that within the goal "Promoting agricultural competitiveness (including fish)" whilst the specific objectives "Crops in deficit" and "Development and application of advanced methodologies" have been up to now properly covered, there are others such as "Reduction of surpluses", "Food quality" and "Improvement of animal production" where there are serious gaps. And no activity at all in the field of fisheries/aquaculture has been undertaken.

In contrast the goal "Promoting industrial competitiveness" has received a marked priority in all its aspects.

As to "Improving the management of raw materials" it is noteworthy that the activities relating to the recycling of raw materials have taken on an importance greater than was provided for in the Framework programme. It is on this basis that reexamination of the relative weighting between the specific objectives "Minerals", "Wood" and "Recycling" should take place.

In implementing the goal "Improving the management of energy resources and reducing energy dependence", a serious imbalance is apparent as between the nuclear and non-nuclear objectives.

Efforts currently under way in respect of "Reinforcing development aid" are mainly directed towards agricultural production and general health.

So far as "Improving living and working conditions" is concerned, the main orientations which were intended have, overall, been followed for the environment, but research on health promotion, health care and health technology requires a greater push.

Lastly, with respect to "Stimulating cooperation and interchange", its implementation will be more gradual than had been expected.

It should be borne in mind that the 1984-1987 Framework programme is the first of its type. It is an instrument that will have to be perfected in the light of the experience gained. The Commission will have an opportunity to do this during the review scheduled for the second half of 1985.

II. Ideas on preparing for the review of the Framework programme

Bearing in mind the decisions taken on R, O&D, the prospect of the accession of Spain and Portugal and various new factors that have

emerged over the last two years, it is already possible to identify some major issues concerning the Community's scientific and technological strategy that should be discussed with the Member States.

On the basis of the first guidelines to be given by the Council, these issues could be investigated in depth during the exercise to compare national and Community scientific policies (COPOL III) planned for June 1985, a comparison that would precede the review of the Framework programme.

Five issues can already be identified :

- a) The Community gives a marked priority to the goal of promoting industrial competitiveness. This tendency will be further accentuated by the special and fundamental effort to promote telecommunications that is urgently needed. However crucial the option on "industrial competitiveness" might be, it is nevertheless essential to avoid supporting this option without prior discussion, mainly at the expense of other goals such as promoting agricultural competitiveness or stepping up development aid.

There is a particular need for discussion on this general issue because of the growing agricultural requirements and the economic importance of planning R, D&D programmes with the direct aim of absorbing the Community's agricultural surpluses.

- b) In the activities relevant to the goal of improving the management of energy resources, heavy imbalances between objectives are persisting and sometimes worsening. This question certainly calls for discussions and decisions.
- c) Should new goals or areas of interest be taken into consideration in the review of the Framework programme ? Current work under the FAST II programme is throwing up major questions in particular on service activities. Companies and services, regional development infrastructure, the future of financial services - all these are subjects whose scientific and technological components could require study. Likewise, follow-up activities in the areas of industrial innovation and the improvement of innovation conditions could be considered.

- d) In the framework of the option "Improving the efficacy of the Community's scientific and technical potential" the Community has set the objective of raising the level of training of its research scientists and providing them with better conditions for carrying out their research by developing European cooperation, the mobility of researchers and links at research level between universities and industry in the research area.

The plan to stimulate cooperation and scientific and technical exchanges 1985-1988 is in line with these objectives.

It seems that the Community should - without interfering with the responsibilities of the national and regional authorities concerned - gradually develop this type of activity and strengthen it as far as possible : extension to non-Community countries in Europe, establishment of inter-centre networks, encouragement of the transfer of technology, improvement of conditions for the movement of scientific and technical apparatus, etc...

- e) Finally, the prospect of Spain and Portugal joining the Community must be examined in the light of its implications for the common R,D&D strategy. The Commission has already initiated studies on the question. The COPOL meeting could form a suitable framework for examination of the subject by national representatives before the review of the Framework programme.

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Finally, the major problems governing the future development of scientific and technical activities in the European Community should be re-assessed with the Member States: that is the financing of these activities and more precisely the increasing part of own resources to be devoted to these activities.

A N N E X I

ANALYSIS OF THE IMPLEMENTATION OF THE FRAMEWORK PROGRAMME
FOR COMMUNITY SCIENTIFIC AND TECHNICAL ACTIVITIES
1984-1987

1. Situation as regards goals
2. Situation as regards objectives
3. Analysis of methods
4. New data

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The Framework Programme 1984-1987, approved by the Council Resolution of 25 July 1983 as far as its principles, objectives and the selection criteria for projects are concerned, has gradually been implemented through decisions on individual programmes taken by the Council.

This analysis covers :

- a. programmes on which decisions have been taken provided their duration falls at least partially within the period of validity of the Framework Programme 1984-1987;
- b. projects allocated an annual appropriation;
- c. programmes which have been formally proposed by the Commission.

All these programmes and projects are included in the summary table of Community scientific and technical activities.

The figures for 1984 are based on the budget outturn, for 1985 on the second reading of the draft budget and for 1986 and 1987 on commitment forecasts.

Each sectoral programme has been analyzed to determine its contribution to each scientific and technical objective and the following two chapters contain a consolidated version of the results.

It is important to bear in mind that the first Framework Programme indicates the balances to be attained over the whole period 1984-1987. The closer the "utilization rate" is to 100 % and the nearer the end of the period, the more accurately a snapshot of the status of the Framework Programme at a given date will reflect the final balance.

1. SITUATION AS REGARDS GOALS

- a) The Framework Programme 1984-1987, the financial estimates for which total 3.750 million ECU (1982 value), contained on 31 March 1985 projects representing a total of 2.685 million ECU (1982 value) for the period 1984-1987. This means that the projects already decided at that date account for 72% of the total for the period under consideration.
- b) The following table shows for each goal the financial estimates of the Framework Programme and their present utilization rates compared to the corresponding situation in 1982.

If one considers only the decided programmes and the projects allocated an annual appropriation (a + b), this table emphasizes the following facts :

- No goal has as yet achieved the financial aim set in the Framework Programme in absolute terms;
- In relative terms :
 - . three goals have exceeded a utilization rate of two-thirds of the amount assigned to them (promoting industrial competitiveness 88 %, improving the management of energy resources 74 % and improving living and working conditions 69 %);
 - . improving the effectiveness of the Community's scientific and technical potential has reached a rate of 51 % and improving the management of raw materials a rate of 38 %;
 - . the three other goals have not even reached one third of the sums given;
 - . the three most generously funded goals together account for 94 % of the appropriations granted.

DEGREE TO WHICH THE BALANCES OF THE FRAMEWORK PROGRAMME WERE ATTAINED AT END-MARCH 1985

GOALS	Framework Programme 1984-1987		Status at end March 85						Situation 1982
	MioECUs 82	%	Actions decided and annual (a + b)			Actions decided, annual and proposed (a + b + c)			
			MioECUs 82	%	% utilization	MioECUs 82	%	% utilization	
- Promoting Agricultural Competitiveness	130	3.5	38.9	1.5	30	44.3	1.5	34	1.9
- Promoting Industrial Competitiveness	1060	28.2	932.6	34.7	88	972.6	32.9	91.7	16.8
- Improving the Management of Raw Materials	80	2.1	30.2	1.1	38	36	1.2	45	1.4
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- Improving Living and Working Conditions	385	10.3	265.2	9.9	69	280.7	9.5	73	9.75
- Improving the Efficacy of the Community's Scientific and Technical Potential	85	2.3	43.4	1.6	51	43.4	1.5	51	0
- Horizontal Activities	90	2.4	16.9	0.6	19	20.1	0.7	22	4
Total Framework programme	3750	100	2684.4	100	72	2952.0	100	79	100

2. SITUATION AS REGARDS OBJECTIVES

Goal 1 : Promoting agricultural competitiveness

The two scientific and technical objectives under this goal have so far been attained to a very incomplete degree (33 % only for the agricultural objective) or not at all (the fisheries activity). Consequently, this goal has not yet benefited from the stimulation recommended by the Framework Programme.

Goal 1 : Promoting agricultural competitiveness, including fishing			
	Framework Programme 1984-1987	State at 31.3.1985	
		Million ECU 1985	% utili zation
1.1 Developing agricultural productivity and improving agricultural products	115	38.4	33
1.2 Developing productivity and improving the quality and processing of fishery products	15	0.5	4
Total Goal 1	130	38.9	30

Objective 1.1 : Developing agricultural productivity and improving products

The specific objectives reflect the wide variety of research lines that are necessarily a feature of agricultural research. In qualitative terms the projects under way meet these diversified objectives fairly satisfactorily. However, the resources employed are distributed unevenly amongst the objectives : two of them (crops in deficit and the development and application of advanced methods) are almost fully covered while others (reduction of surpluses, food quality, improvement of animal production and integrated disease and pest control) are less covered. It should be pointed out, however, that almost all the research work in these latter fields are conducted under the agricultural research programme in which the relatively inexpensive activity of coordinating work financed directly by the Member States plays an important multiplying role.

Objective 1.2 : Developing productivity and improving fishery products

No Community R & D activities are in progress on fishing. There is merely the spin-off from the JRC's aerospace remote sensing programme.

Goal 2 : Promoting industrial competitiveness

This goal at present enjoys the highest utilization rate of 88 %. However the various programme decisions have not been evenly distributed over the three objectives in this goal, as the following table shows.

Goal 2 : Promoting industrial competitiveness			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utilization
2.1 Removing and reducing impediments	30	44.7	149
2.2 New techniques and products for the conventional industries	350	245.9	70
2.3 Promoting and developing new technologies			
2.3.1. Information technology	600	604.9	101
2.3.2 Biotechnology	80	37.1	46
Total Goal 2	1.060	932.6	88

Objective 2.1 : Removing and reducing hindrances

The indications in the Framework Programme have already been exceeded. The overspending - high in percentage terms but limited in absolute value - is due to the multisectoral nature of the objective, the growing importance attributed to removing technical barriers to the establishment of a genuine European market and the great contribution that the JRC programme makes to these objectives.

Objective 2.2 : Improving and developing new techniques and products for the conventional industries.

The utilization rate for this objective is very close to that for the whole of the Framework Programme and the qualitative guidelines laid down for this objective have largely been followed.

Objective 2.3 : Promoting and developing new technologies

2.3.1. Information technology

This objective has already reached the financial estimates given in the Framework Programme, evidence of the high priority given to this strategic field.

The work done satisfactorily follows the guidelines laid down for the three specific objectives although slightly more weight than planned was given to the mastery of basic technologies. This objective should be extended to the emerging field of telecommunications.

2.3.2. Biotechnology

The spending on this objective has reached almost half the figure given in the Framework Programme. With particular reference to basic research in key sectors, the subjects identified as important in the Framework Programme and the content of the existing programmes coincide almost perfectly, and this is also the objective for which expenditure comes closest to the estimates in the Framework Programme. On the other hand contextual measures and in particular industrial applications of biotechnology have suffered from the restriction of funds for the biotechnology programme.

Goal 3 : Improving the management of raw materials

At present this goal has a utilization rate of only 38 %, which may be due to the fact that the sectoral programme on raw materials, a major contributor to this objective, expires at the end of 1985, i.e. half way through the first Framework Programme.

Goal 3 : Improving the management of raw materials			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utili- zation
3.1 Optimum use of raw materials	80	30.2	38
Total Goal 3	80	30.2	38

Objective 3.1 : Optimum use of raw materials

The various objectives have been satisfactorily pursued in qualitative terms. However, the work on recycling has been more extensive than planned in the Framework Programme and the balance between the three specific objectives (minerals, wood and recycling) should be reviewed.

Goal 4 : Improving the management of energy resources and reducing energy dependance

With an utilization rate of 74 % this goal at present accounts for 49 % of all the decisions taken on R,D and D. However, the impact of these decisions on the four objectives making up this goal do not at present correspond to the relative weighting given in the Framework Programme.

Goal 4 : Improving the management of energy resources and reducing energy dependance			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utili- zation
4.1 Developing nuclear fission energy (in particular its safety aspects)	460	410.0	89
4.2 Controlled thermonuclear fusion (including JET)	480	591.2	123
4.3 Developing new energy sources	310	121.5	39
4.4 Rational use of energy (systems analysis, hydro-carbons, coal, energy saving)	520	194.5	37
Total Goal 4	1.770	1.317.3	74

It will be noted that :

- the proportion of nuclear to non-nuclear objectives, planned to be 1/1 in the Framework Programme, is now 3/1.
- On the nuclear side, the share of fusion compared to fission, planned to be about 1/1, is now around 1,4/1.
- On the nuclear side the share of renewable energies compared to the rational use of energy has been kept at approximately 0,6/1 as in the Framework Programme.

These balances reflect the status of current decisions - they could be modified by the adoption of demonstration projects for 1986-1987 - but it is obvious that they will have to be examined in depth at the time of the review.

Objective 4.1 : Developing nuclear fission energy

The guidelines in the Framework Programme have largely been followed in qualitative terms, the emphasis being on safety aspects, and the utilization rate for this objective has reached almost 90 % of the amount indicated.

Objective 4.2 : Controlled thermonuclear fusion

Although the implementation of this objective is in line with the qualitative guidelines in the Framework Programme, it has far exceeded the financial indications. During the review special attention must be paid to evaluating the requirements for this objective.

Objective 4.3 : Development of renewable energy sources and
Objective 4.4 : Rational use of energy

At present these two objectives have a utilization rate of less than 40 % but the qualitative guidelines in the Framework Programme have been followed fairly satisfactorily. The rate should increase significantly with the continuation of the demonstration projects for 1986 and 1987 but probably the financial aims of the Framework Programme will not be completely attained. During the review the specific objective relating to hydrocarbons should be clarified.

Goal 5 : Reinforcing development aid

Expenditure on this goal is well below the estimates in the Framework Programme : the utilisation rate is barely 27 %.

Goal 5 : Reinforcing development aid			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utili- zation
4.1 Scientific and technical activities for the benefit of developing countries	150	39.9	27
Total Option 5	150	39.9	27

The expenditure is focused mainly on two objectives (agricultural production and health) which are allocated about 80 % of the total. In contrast other objectives such as fishing and fish breeding, resources of the soil and the environment have received little if any attention.

The energy objective is fairly satisfactorily covered thanks to the spin-off from the non-nuclear energy programmes that is useful to the developing countries.

Qualitatively the content of the programme satisfactorily matches the definition of the objectives in the Framework Programme even if in the current state of affairs this programme lays more emphasis on general guidelines and selection criteria for projects than on specific objectives or sectoral guidelines. The 80 % recorded for agricultural resources and health agrees well with the guidelines given.

Goal 6 : Improving living and working conditions

The utilization rate for this goal is close to that for the whole of the Framework Programme and there is a balanced allocation of funds to the two scientific and technical objectives.

Goal 6 : Improving living and working conditions			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utili- zation
6.1 Improving safety and protecting health	190	131.2	69
6.2 Protecting the environment	195	134.0	69
Total Goal 6	385	265.2	69

Objective 6.1 : Improving safety and protecting health

The main guidelines for this objective have been fairly well followed, in particular as regards the study of the personal environment and human adaptation. However, research on health promotion, health care and health technology total less than one-third of the estimates in the Framework Programme.

Objective 6.2 : Protecting the environment

For this objective the guidelines in the Framework Programmes have been well followed in qualitative terms and fairly well in quantitative terms, allowing for the fact that environmental management has been slightly better treated than was planned in the Framework Programme in comparison to the overall understanding of environmental problems. This is due to the fact that the environment and climatology programme adopted covers only the first half of the period 1984 - 1987 and many other programmes extending over the full period have spin-off on objective 6.2 but naturally only on management problems and not on the overall understanding of environmental problems.

Goal 7 : Improving the efficacy of the Community's scientific and technical potential

This goal has only just exceeded 50 % of the funds assigned it by the Framework Programme. However, it concerns the implementation of a new activity, the stimulation action, which is to be started gradually.

Goal 7 : Improving the efficacy of the Community's scientific and technical potential			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utili- zation
7.1 Improving the efficacy of the Community's scientific and technical potential	85	43.4	51
Total Goal 7	85	43.4	51

8. Horizontal activities

This chapter in the Framework Programme contains all the activities that cannot be assigned to one or more specific objectives but are needed for the definition of scientific and technical strategy, the evaluation of programmes and the use and exploitation of their results. Its current utilization rate is the lowest of all.

Horizontal activities			
	Framework Programme 1984-1987	Status at 31.3.1985	
		Million ECU 1982	% utili- zation
Horizontal activities	90	16.9	19
Total Horizontal activities	90	16.9	19

During the review the total funds to be allocated to this chapter will have to be re-examined, even bearing in mind the proposal for a programme on the utilization of research results.

3. ANALYSIS AS REGARDS METHODS

This report on the implementation of the Framework Programme needs to be rounded off by general comments, based on experience gained to date, concerning the methodology that has been used.

- a) In the Framework Programme the balances between goals depend on the level of the total funds allocated to R, D and D. A change of more than 10 % in this total level should lead to a modification in these balances.
- b) The financial indications given represent the allocation of the Community R, D & D budget to each goal. This budget is made up of the sum of the costs incurred in all the types of Community action : JRC activities, shared-cost projects, concerted-action projects. The financial indications are therefore a measure of the Community effort but do not directly reflect the scientific and technical scope of Community action. In other words these figures are not the same as what might be called the turnover for R, D and D concerned by Community action which would be another yardstick for the relative priorities given to each goal at Community level.
- c) The scientific and technical objectives identified in the first Framework Programme are not entirely homogenous : the development of new technologies contributes directly to many other objectives. Likewise the objective of stepping up scientific and technical activities for the benefit of the developing countries consists mainly of research in medicine, public health and agriculture, which are directly relevant to other objectives. This sometimes makes it difficult to determine what contribution a sectoral programme has made to the various scientific and technical objectives.
- d) Each sectoral programme runs for four of five years and a start is generally made on preparing it two years before it is adopted. If the Framework Programme is to serve as a planning guide, it must therefore provide guidelines for a period that at any given time includes at least the early years of every programme in the course of preparation. These guidelines are of two kinds : qualitative, i.e. the objectives to be pursued, and quantitative, i.e. the approximate expenditure to be allocated to these objectives. There can obviously be no question of laying down these guidelines - and in particular the quantitative ones - in precise terms for a long period ahead but it appears useful to place the four-year Framework Programme in the context of a long-term outlook indicating trends. This would mean that just before the review of the Framework Programme, i.e. when there are two years left to run, sectoral programmes could be prepared on the basis of the guidelines for the last year of the Framework Programme and the more general lines of the long-term outlook.

4. NEW DATA

Since the 1984-1987 Framework Programme was adopted a number of new facts have emerged :

- The European Council meeting in Fontainebleau formally approved the principle of allocating an increasing proportion of own resources to the development of the Community's scientific and technical activities.
- The Economic and Social Committee has prepared an own-initiative report on research priorities, the conclusions of which provide valuable data for the review of the Framework Programme.
- The FAST programme will be drawing up preliminary conclusions in mid-1985 but it is already obvious that research on services has to be tackled.
- It is now clear that telecommunications calls for a joint effort carried out in close cooperation with the national PTT organizations. The Council has adopted six priority lines of action in this field, one of which concerns the definition and implementation of R, D & D projects.
- The accession of Spain and Portugal will have an impact on the Community's scientific and technical strategy and hence on the Framework Programme.

The review of the Framework Programme will have to take these factors and their implications into account.