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OF RESEARCH AND DEVELOPMENT**

1980-1988

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1. INTRODUCTION

1.1. General comments

This report forms part of a series of yearly reports providing regularly updated information on trends in the government financing of R & D in Member States of the Community.

The Community survey designed to gather data on government financing of research and development takes into account only the budget appropriations entered in the budgets of the Member States for R & D, and not the budget appropriations actually spent.

The corresponding amounts are subdivided into final appropriations, voted by the competent authorities, for the years prior to the survey year and provisional appropriations, subject to revision, for the current year.

In addition, the data on government financing of R & D are classified by socio-economic objectives according to the 1983 version of the NABS nomenclature (Nomenclature for the analysis and comparison of science programmes and budgets).

The most important information on the collection, processing and interpretation of basic data is given below (and in the annexes). Further details are given in a handbook drawn up by the Subcommittee.¹

1.1.1. The field of the survey remains the same as in previous reports. It covers the financing of R & D by central government as defined in the European system of integrated economic accounts (ESA). This definition includes within central government the *Länder* of the Federal Republic of Germany, but excludes local government. For public enterprises, only provisions by central government are taken into account in the R & D budget. An analysis of Community-financed R & D is also included.

1.1.2. In common with most Community statistics and like last year's report, this report takes 1980 as the reference year. This is the reference most commonly used for Community statistics in general and national accounts in particular to calculate amounts in real terms. The analysis of time series will be confined to a period starting in 1981 because of the major breaks in the series between 1980 and 1981.

1.1.3. This report gives data available in 1988 on final budgets for 1987 and provisional budgets for 1988 together with various time series going back to 1981. The basic data are given in terms of current prices, and at current exchange rates,² but the most important tables are those which give an idea of the trends, in real terms, in R & D financing (Table I, Section 2, and Table 3 in the statistical annex).³ These tables allow a more realistic comparison between Member States for a particular year and between different years in a particular Member State.

(a) In the absence of a Community survey providing information on the various components of R & D and their national structure, the Statistics Subcommittee decided to make use of exchange rates expressed in ecus for the purposes of the inter-country comparisons. However, with this method of conversion it was not possible to compare relative prices in the various Member States, and still less those of Community and non-Community countries. The dollar's recent fluctuations on the exchange markets are a sufficient reminder, if one were needed, of this difficulty. Consequently, pending the availability of a unit of reference better suited to the conversion of R & D figures, the Subcommittee opted for purchasing

¹ See 'Methods and definitions used for the annual report on government financing of R & D' (OS/3/87). This document can be obtained from the Subcommittee's secretariat.

² For implementation of this principle, see Annex 2.

³ Generally, the tables in the text are numbered in roman numerals and those in the statistical annex in arabic numerals.

power parities, which are used for comparison of aggregates, particularly gross domestic product, in national accounts. Not only do these parities include non-Community countries from the comparison, they also – unlike exchange rates – remove differences in the general level of prices as between Member States.

- (b) In the past the comparison of data over time has been made using an index designed to illustrate the trend in R&D prices and defined as a weighted average of the three main price categories, reflecting the trend in labour costs, capital costs and other current costs in the research sector.⁴

Given the impossibility of devising price indices for these three categories in the research sector at the present time and unable to refer to anything other than general indicators reflecting cost trends in the economy as a whole, the Subcommittee decided temporarily to abandon the specific R&D index until it had access to series of indices that would genuinely reflect research price trends.

In the meantime it was decided to use a deflator in conjunction with the solution chosen for the inter-country comparison of R&D figures. The obvious choice was the gross domestic product implicit price index, defined as the ratio of GDP expressed as a nominal value to GDP expressed in volume terms.⁵

1.1.4. In the body of the report, an attempt has been made to distinguish clearly between the retrospective analysis of the trends from 1981 to 1987, based on actual R&D appropriations taken from final budgets, and the comparison of provisional figures for 1987 and 1988 based on data from provisional budgets, likely to be substantially revised during the year.

1.1.5. At the end of the report there is a specific analysis of government R&D funds for enterprises (Section 5) and for multilateral cooperation (Sections 6 and 7). There is also a provisional quantitative evaluation of the budget appropriations for R&D in fields not explicitly mentioned in the 1983 NABS nomenclature, but which have been singled out for analysis because of their growing interest; these are biotechnology, information technology and developing countries (Section 8).

1.2. General characteristics of total and government financing of R & D

To obtain a better picture of the importance of government funds in total R & D expenditure, it is useful to make a comparison both between the Member States and between the Community of Twelve and the OECD countries with a major research effort (United States, Japan). For this purpose, the data used throughout Section 1.2 will be OECD data taken from biennial surveys on overall R & D spending by OECD member countries, converted into ecus.

Although they relate to the same definitions of R & D, OECD and Community data differ nevertheless on certain points:

- the data obtained from OECD ISY (International Statistics Year) surveys reflect actual expenditure within national territory established after the event and are compiled by the research establishments themselves;
- Community data, taken from national budgets, relate to the proposed government funding (i.e. are compiled in advance of spending) for research carried out within and outside national territory and are supplied by those providing the research funds.

⁴ For further details, see the previous report on government financing of R&D.

⁵ The Secretariat will still continue to update the budget appropriations on the basis of the exchange rates and R & D price indices and will supply the relevant information on request.

These differences are reflected in the concepts used by the two organizations, particularly the concept of government financing, but a structural analysis of the OECD data nevertheless provides interesting pointers for the Community countries. The most recent data available are for 1985 (or, failing that, are estimates based on earlier years).

1.2.1. *Gross domestic expenditure on R & D*

Calculated in terms of purchasing power parities rather than exchange rates, gross domestic expenditure on R & D in the United States, EUR 12 and Japan may be broken down approximately as follows for 1985:

USA	EUR 12¹	Japan²	Total
51 %	30 %	19 %	100 %

This includes defence expenditure which has a significant effect on the comparison. Taking estimates of gross expenditure on civil R & D only, the gap narrows as follows:

USA	EUR 12¹	Japan²	Total
44 %	33 %	23 %	100 %

1.2.2. *Gross domestic expenditure on R & D and government financing*

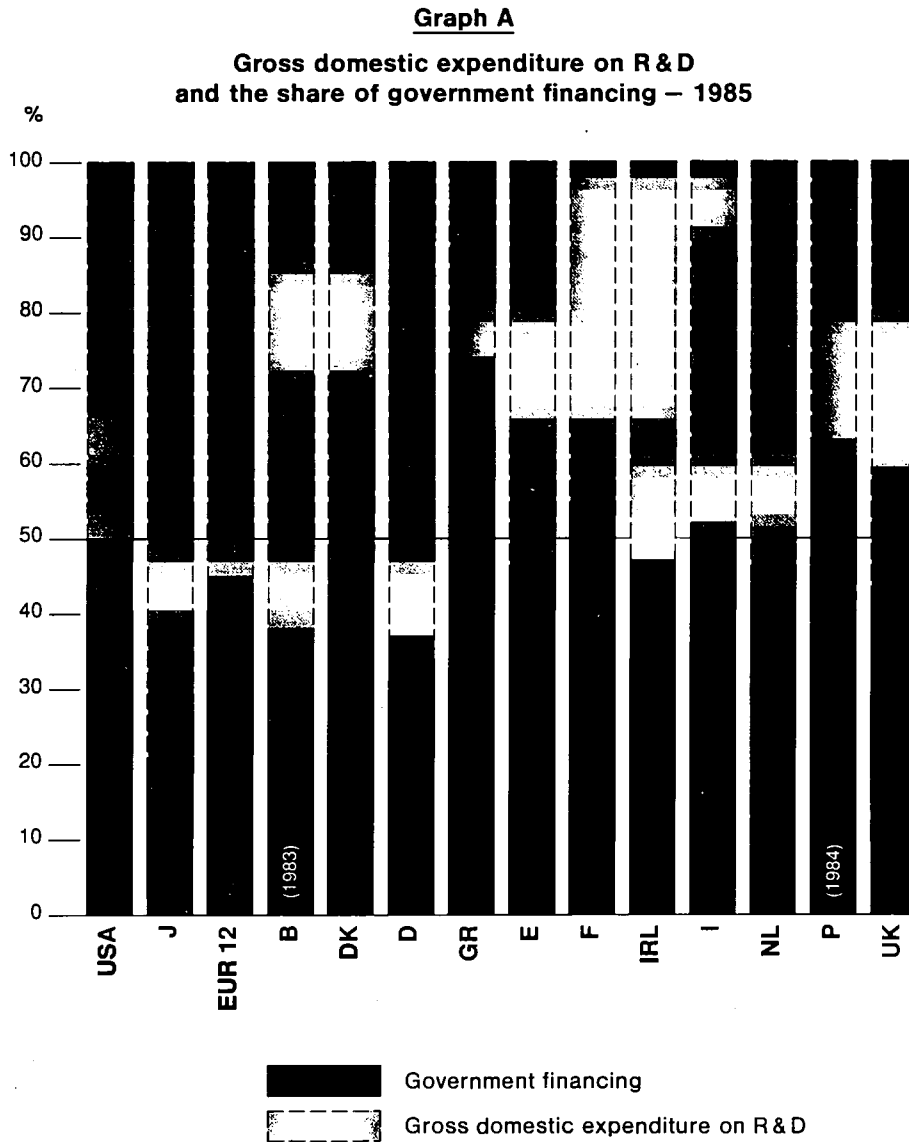
Evaluated from data for 1985 or the nearest year from some Community countries, the share of government financing in gross domestic expenditure on R & D is as follows:

USA	EUR 12¹	Japan
50 %	45 %	21 %

¹ Estimate.

² Japanese figures adjusted by OECD.

The actual share of government financing in the total R & D expenditure of the Member States is shown in the graph below:



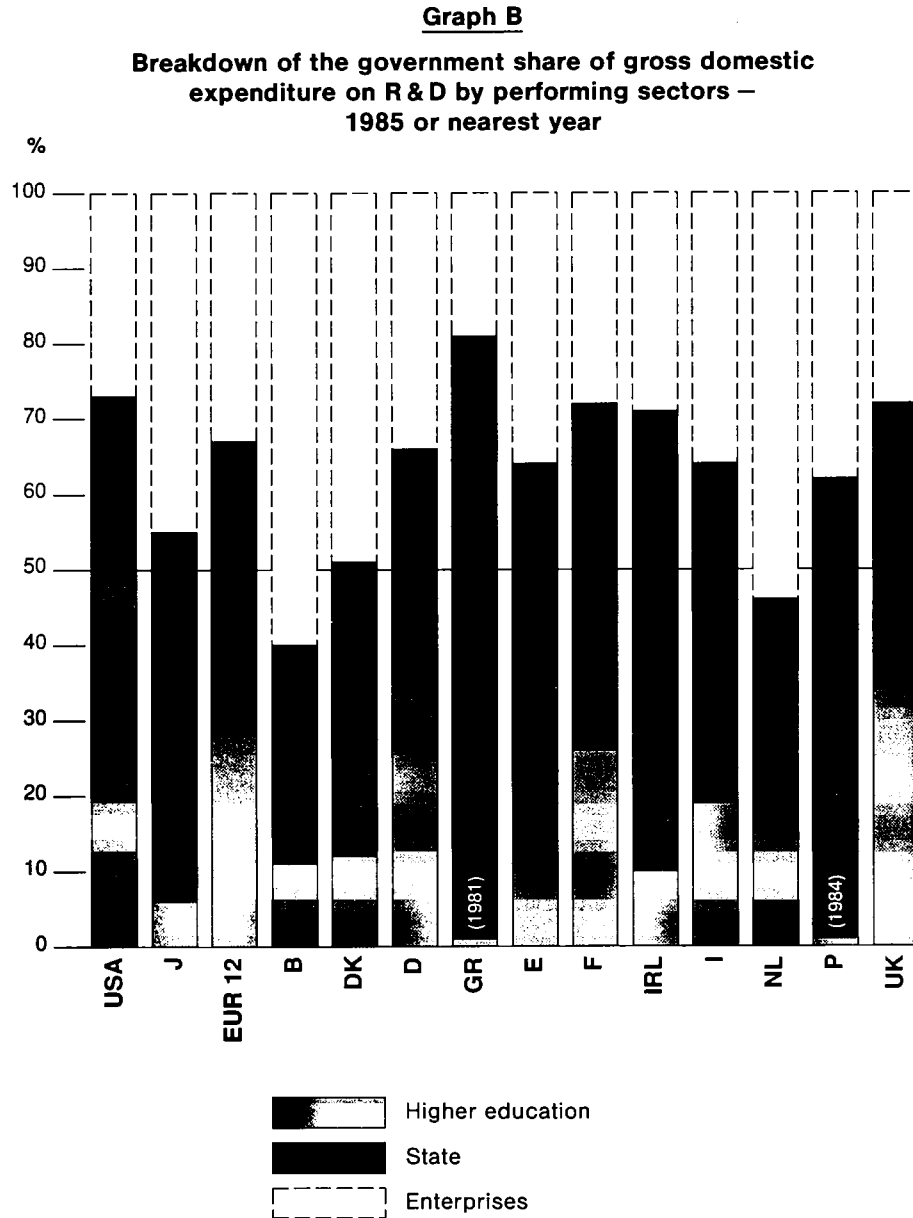
Source : OECD/DISTI DATA BANK - JANUARY 1988

In two countries the share of government financing in gross domestic expenditure on R & D is well above the Community average of 45 %: Greece (74 %) and Portugal (62 %).

In contrast, two countries are well below this average: Germany (37 %) and Belgium (38 %).

1.2.3. *Breakdown of government financing of gross domestic expenditure on R & D by performing sectors*

If we now consider how government funding is actually distributed among the three main sectors carrying out research – industry, the public sector/non-profit-making institutions, and higher education – we find the situation illustrated in the following graph:



Source : OECD/DISTI DATA BANK - JANUARY 1988

In the breakdown of government financing of gross domestic expenditure on R & D the Community occupies a position between the United States and Japan: the USA, EUR 12 and Japan assign respectively 47 %, 26 % and 5 % of their public funding to enterprises and 23 %, 32 % and 52 % to higher education.

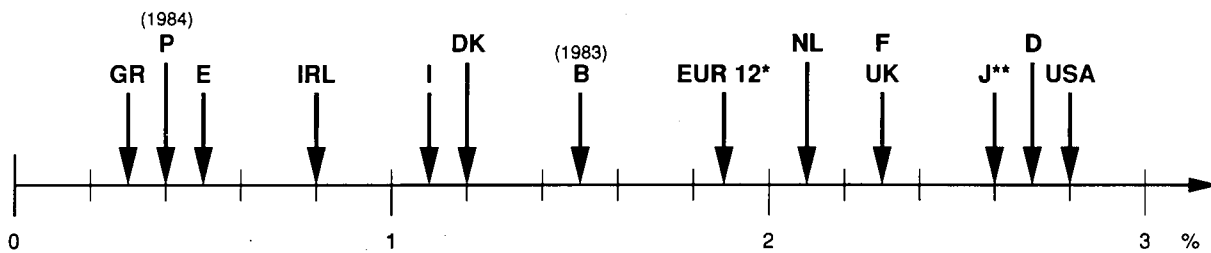
One Member State, France, breaks down its government R & D funding on the lines of the Community average.

Among the other Member States, the United Kingdom is the country where the pattern is nearest to the American one, whereas the Netherlands, Belgium and Denmark have a breakdown more closely akin to that of Japan.

1.2.4. Ratio of gross domestic expenditure on R & D to gross domestic product

If gross domestic expenditure on R & D is related to gross domestic product to obtain some ideas of the impact of research expenditure on the economy, the relative position of the various countries can be represented as follows:

Graph C
Ratio of gross domestic expenditure on R & D
to gross domestic product – 1985 or nearest year



Source : OECD/DISTI DATA BANK - JANUARY 1988

* Estimate
 ** Japanese figure adjusted

Among the Member States there was only one country in 1985 that had a ratio of gross domestic expenditure on R & D to gross domestic product well above the Community average of 1.9 % and close to that of Japan (2.6 %) and the United States (2.8 %): this was Germany (2.7 %).

Three other countries have a ratio above the Community average: United Kingdom and France (2.3 %) and the Netherlands (2.1 %).

The other countries have a ratio well below the Community average.

2. TRENDS IN BUDGET APPROPRIATIONS FOR R & D

Before examining the trends in budget appropriations for R & D in the Community countries, we shall briefly survey the comparative trends, as regards total R & D expenditure and the share of government financing, between the Community and those non-Community countries of most interest for comparison purposes, the United States and Japan.

2.1. Comparative trends in the Community, the United States and Japan

Although we have comparable figures for all three on total gross domestic R & D expenditure, the same is not true of government spending.

The only figures currently available for R & D budget appropriations in Japan are partial estimates that do not go beyond 1981 for two essential reasons. Firstly, it is extremely difficult to single out the real share of research in the Japanese budget. Secondly, the estimates available apply to domestic research and disregard Japanese Government financing for research carried out abroad.

It therefore seemed preferable in the case of government R & D appropriations to make use of the much more reliable figures on government funding taken from the OECD surveys, the latest of which for Japan covers 1985.

In order to gain an overall picture of the comparative positions of the Community of Twelve, the United States and Japan, we shall look at:

- (i) trends in gross domestic expenditure and government financing of R & D in relation to gross domestic product, so as to obtain a clear understanding of the links between R & D and the general economy; and
- (ii) the trend in the total number of researchers and in the number employed in the public sector, so as to highlight the human resources devoted to research.

2.1.1. Comparative trends in the ratio of gross domestic R & D expenditure to GDP and in the total number of researchers

If we consider only the period 1981-85 for which data have been estimated for EUR 12, we find a steady increase in the ratio of gross domestic R & D expenditure to the GDP which demonstrates the relationship between R & D and the economy (see Graph D). However, the growth rate differs for the three regions under consideration: the ratio increases by an average of 1.8% a year for the Community as a whole compared with 2.6% for the United States and 4.1% for Japan.

With these annual growth rates holding relatively steady over the period under review, the gap separating the Community countries from the USA and Japan will continue to widen since there is no sign of any change in the trends observed.

Turning to the trends in the total number of researchers (estimated for EUR 12), still for the period 1981-85 (see Graph E), we once again observe differences in the average rates of growth, the annual average increase being estimated at 2.2% for the Community, 3.6% for the United States and 4.2% for Japan. Put another way, the growth in the number of researchers is almost the same as the growth in the ratio of domestic expenditure on R & D to GDP.

2.1.2. Comparative trends in the ratio of government financing of R & D to gross domestic product and in the number of researchers in the public sector

In contrast to the previous ratio, the ratio of government financing of R & D to GDP declined very slightly in Japan and showed a relatively modest increase for the Community as a whole and the United States over the period 1981-85 (see Graph D).

In the United States this modest increase is mainly due to the impact of defence appropriations which went up substantially over the period 1981-85, while government funding of civil R & D even declined in real terms over the same period.¹

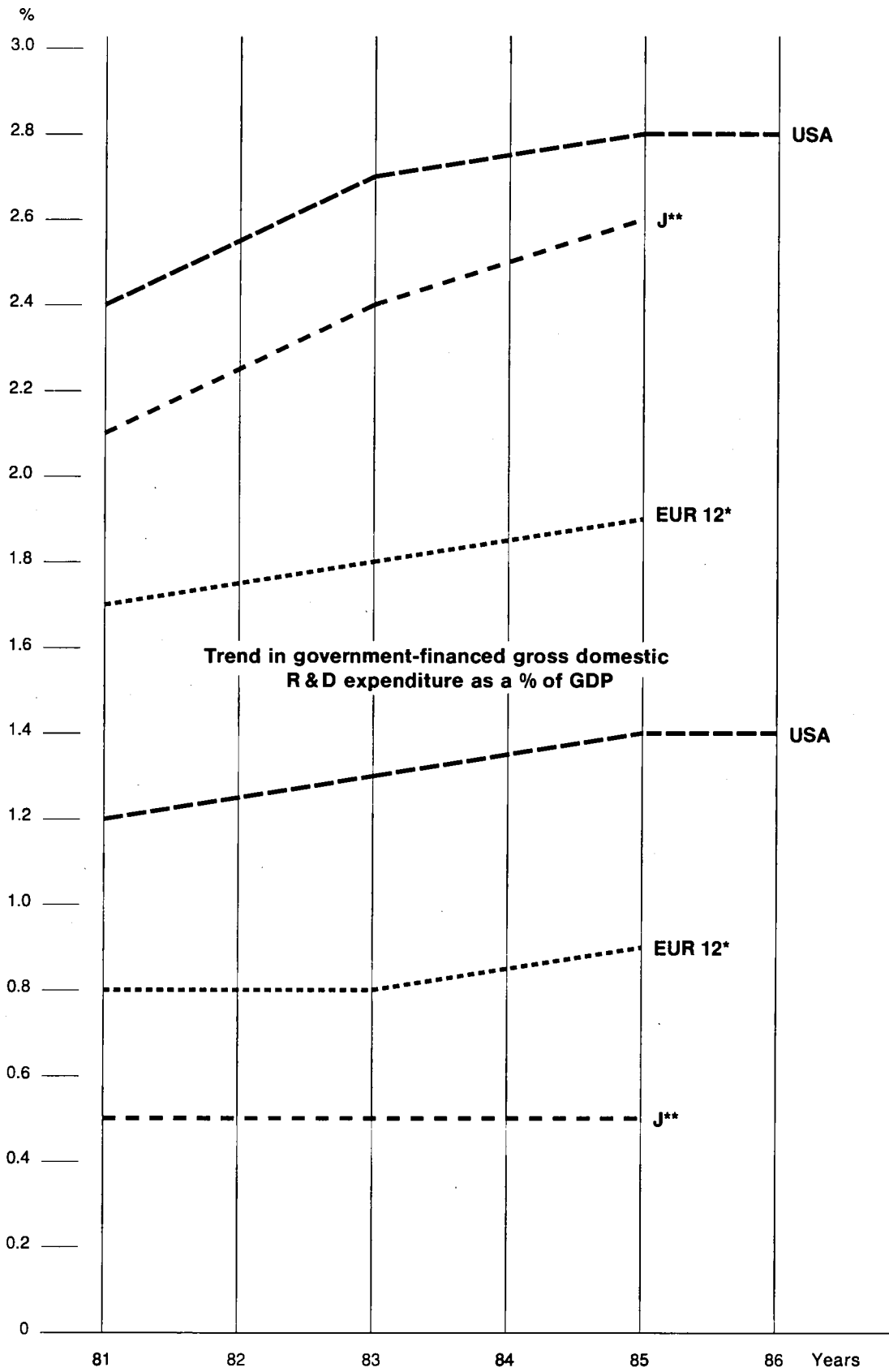
A predominance of one of the two types of appropriations cannot account for the small increase in the Community ratio. On average civil R & D appropriations increased at almost the same rate as total government appropriations over the period 1981-85 and this trend continued in 1986-87 as is shown by Table I, where the figures have been deflated by the GDP implicit price index.

The number of researchers employed in the public sector also fell slightly in Japan over the period 1981-85 (see Graph E) and showed a smaller increase in the United States than in the Community countries.

¹ See annual report on government financing of R & D 1980-87.

Graph D

Trend in gross domestic R & D expenditure to GDP

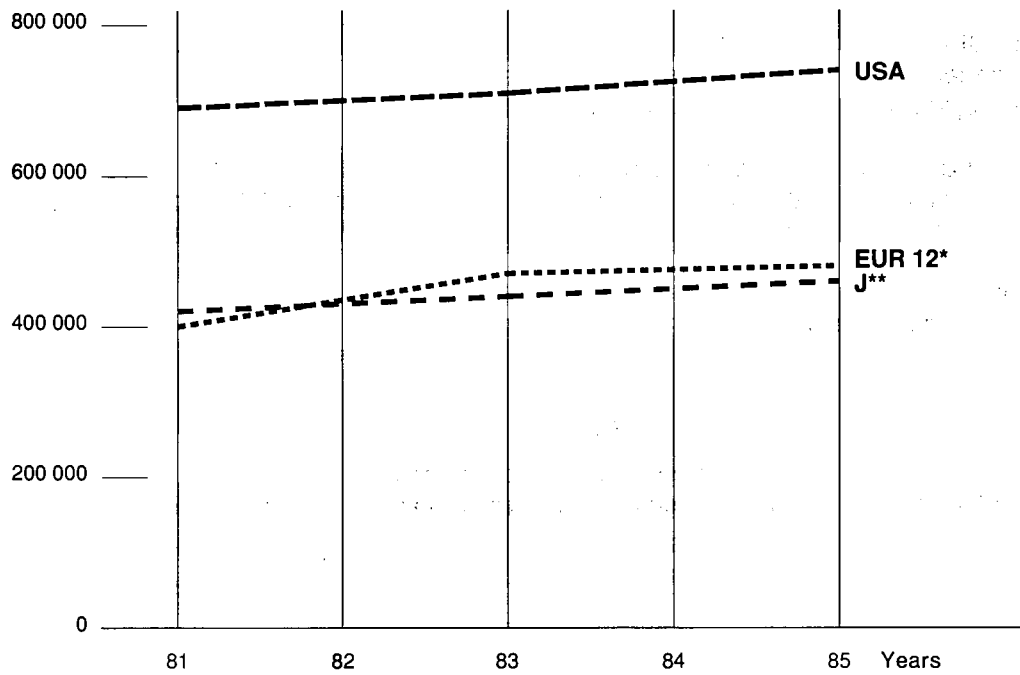


Source : OECD/DISTI DATA BANK - JANUARY 1988

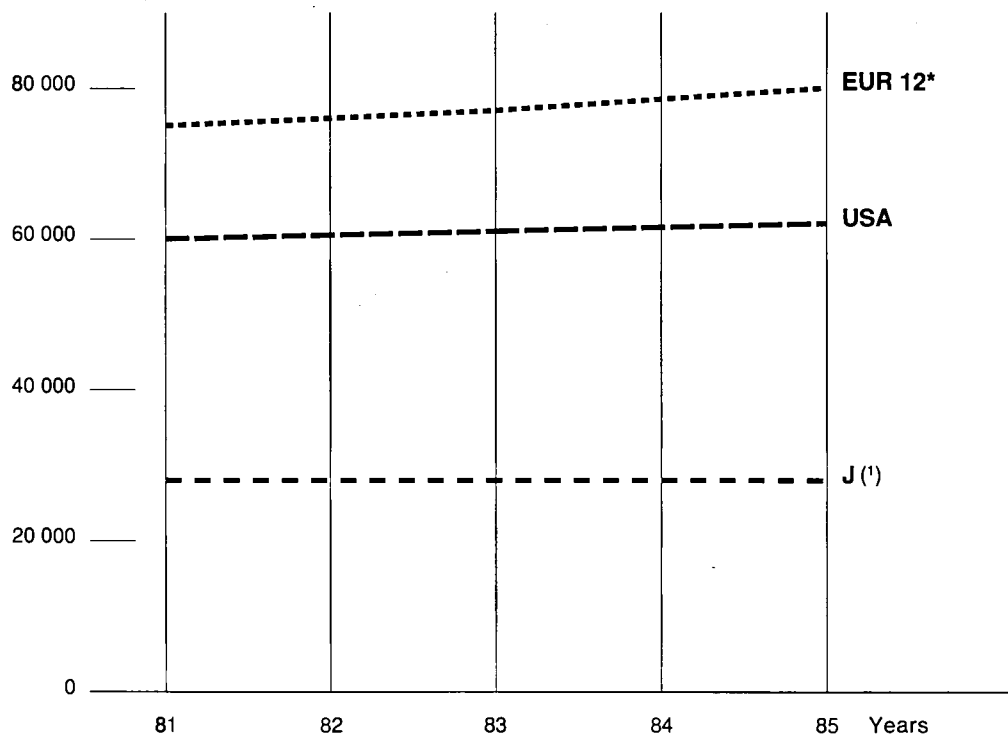
* Estimate
** Japanese figure adjusted

Graph E

Total number of researchers (full-time equivalent)



Number of researchers in the public sector (full-time equivalent)



Source : OECD/DISTI DATA BANK - JANUARY 1988

* Estimate
** Japanese figure adjusted
(1) Not full-time equivalent

2.2. Trends in the breakdown of budget appropriations for R & D within the Community

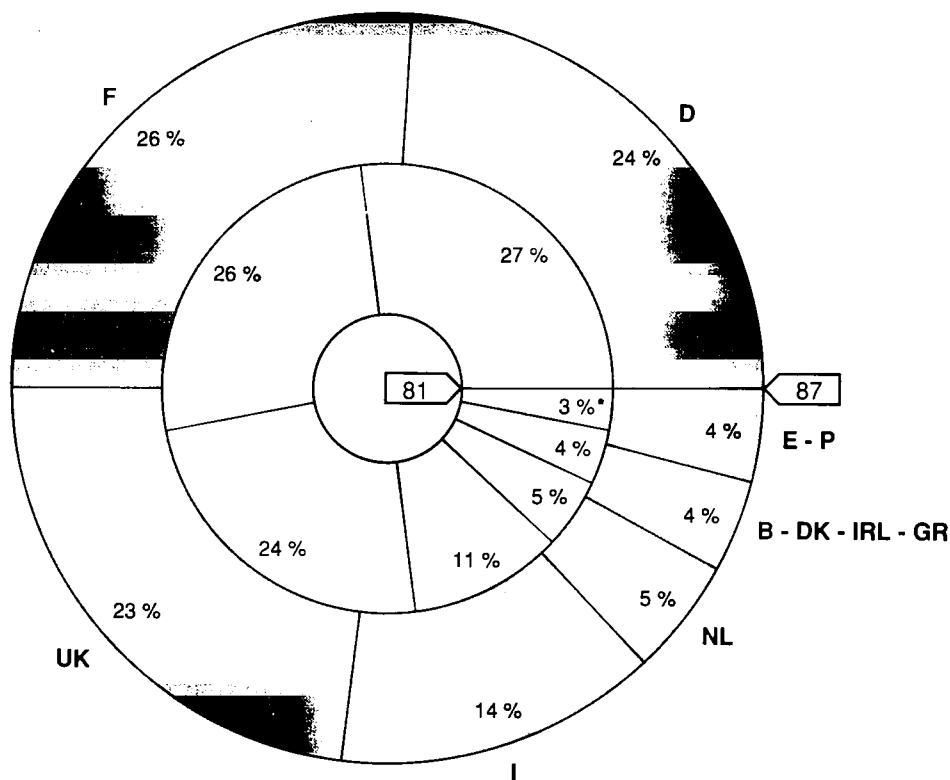
The figures in the following paragraphs relate solely to the Community and refer to budget appropriations for R & D as defined in the manual 'Methods and definitions' (see footnote 1, page 7).

Furthermore, although 1980 was chosen as the reference year for the preparation of Community statistics in general, time comparisons of budget appropriations will be based on 1981, since there was a major break in the time series for R & D between 1980 and 1981.

Before examining the trends in government spending on R & D in the Community as a whole and in the individual Member States, it might be useful to consider the relative importance of each country within the Community.

In order to rule out the incidence of currency parities and fluctuations in prices, figures deflated by the GDP implicit price index and converted on the basis of purchasing power parities will be used.

Graph F
Breakdown of budget appropriations for R & D
(at 1980 prices and purchasing power parities) within the Community



* Estimate

Allowing for the fact that the choice of 1980 as reference year was arbitrary, the previous graph immediately shows that the share of the three large Community countries (Germany, France and the United Kingdom), which together accounted for 77 % of the total budget appropriations in 1981, fell to only 73 % in 1987. This relative decline is chiefly due to Germany's slower rate of increase in appropriations for R & D and to the sharp increase in Italy's government R & D funding in recent years.

2.3. Trends in R&D budget appropriations for the Community as a whole

A distinction will be made below between budget appropriations for civil R&D and those for defence within total government spending on R&D although, naturally, in view of the likely interactions between these two major research sectors, only a study of the trends of both types of appropriations can give an overall picture of R&D budget trends.

2.3.1. Trends in total R&D budget appropriations

In 1987 R&D budget appropriations for EUR 12 amounted to ECU 37 200 million, almost 1 900 million up on 1986, giving a nominal increase of only 5.4%, below the average annual rate of increase over the period 1981-87, which was 7.2%.

Commission appropriations, which account for 2.1% of Community budget appropriations, rose comparatively by 23.6% in 1987 and have been increasing at an average annual rate of 16.5% since 1980.

Evaluated in 1980 prices and purchasing power parities rather than in ecus, total Community appropriations for R&D increased by 3.3%, exceeding the average rate of growth in research spending over the period 1981-87, which was 2.7%.

A comparison of provisional budgets for 1987 and 1988, expressed in 1980 prices and purchasing power parities, indicates that R&D appropriations are likely to increase slightly more than in 1986 (3.7%).

2.3.2. Trends in budget appropriations for civil R&D

Expressed in 1980 prices and purchasing power parities, budget appropriations for civil R&D in 1987 increased by 3.3%, the same rate as total budget appropriations for R&D and slightly above the average annual rate of 3% for the period 1981-87.

To judge from provisional budgets for 1987 and 1988 expressed in 1980 prices and purchasing power parities, budget appropriations for civil R&D should increase in 1988 at the same rate as in 1987 (3.5%).

2.3.3. Trends in the ratio of R&D budget appropriations to total budgets and to gross domestic product

The ratio of R&D budget appropriations to total budgets for EUR 12 may be estimated at around 3.1% well below the estimated level of earlier years.

The ratio of R&D budget appropriations to GDP has remained barely above 1%, again lower than the estimated level in previous years.

2.4. Trends in R&D budget appropriations in the Community Member States

2.4.1. Trends in the total R&D budget appropriations of the Member States

The total figure for R&D budget appropriations for the period 1981-87, expressed in 1980 prices and purchasing power parities, conceals different trends in individual Member States.

The countries fall into three groups:

(a) countries with a high real growth rate in 1987:

	Rate 1986-87	Average rate 1981-87
Portugal	19.1 %	
Spain	22.0 %	15.9 %

(b) countries with a real growth rate in 1987 that was above the Community average:

	Rate 1986-87	Average rate 1981-87
Italy	9.3 %	7.7 %
Denmark	7.7 %	7.9 %
Ireland	6.5 %	5.2 %
Netherlands	3.8 %	1.1 %
Greece	2.7 %	8.8 %

Another feature common to most of these countries is a high real growth rate throughout the period 1981-87.

(c) countries which recorded a rate of increase in real terms that was below the Community average in 1987:

	Rate 1986-87	Average rate 1981-87
France	2.0 %	2.8 %
United Kingdom	1.2 %	1.2 %
Germany	0.9 %	0.8 %
Belgium	-1.0 %	0.7 %

Most of these countries similarly recorded a real growth rate below the Community average over the period 1981-87.

A comparison of provisional budgets for 1987 and 1988 (in 1980 prices and purchasing power parities) would result in the following adjustments for 1988 in each of the three groups:

- (a) no change in the trends in Spain and Portugal;
- (b) there would be a sharp decline in Ireland's R&D appropriations;
- (c) research budget appropriations in Germany, the United Kingdom and the Netherlands would fall in real terms.

2.4.2. Trends in budget appropriations for civil R&D in the Member States

In countries where defence does not play an important role in national R&D, appropriations for civil R&D naturally follow the same pattern as total research appropriations.

Apart from Italy which recorded a very marked increase in appropriations for civil R&D, the increase in these appropriations in the other countries was below the Community average; France's appropriations actually fell.

	Rate 1986-87	Average rate 1981-87
United Kingdom	2.4 %	1.8 %
France	-0.4 %	-1.1 %
Germany	0.1 %	0.1 %
Italy	11.1 %	7.5 %

It seems likely from a comparison of provisional budgets for 1988 (see Table II) that civil R & D will show a very marked increase in real terms in Italy, a sharp increase in Denmark and Spain, and will be above the Community average in Portugal and the United Kingdom; there will be a marked decline in civil R & D appropriations, on the other hand, in France and Germany and a very marked decrease in Ireland.

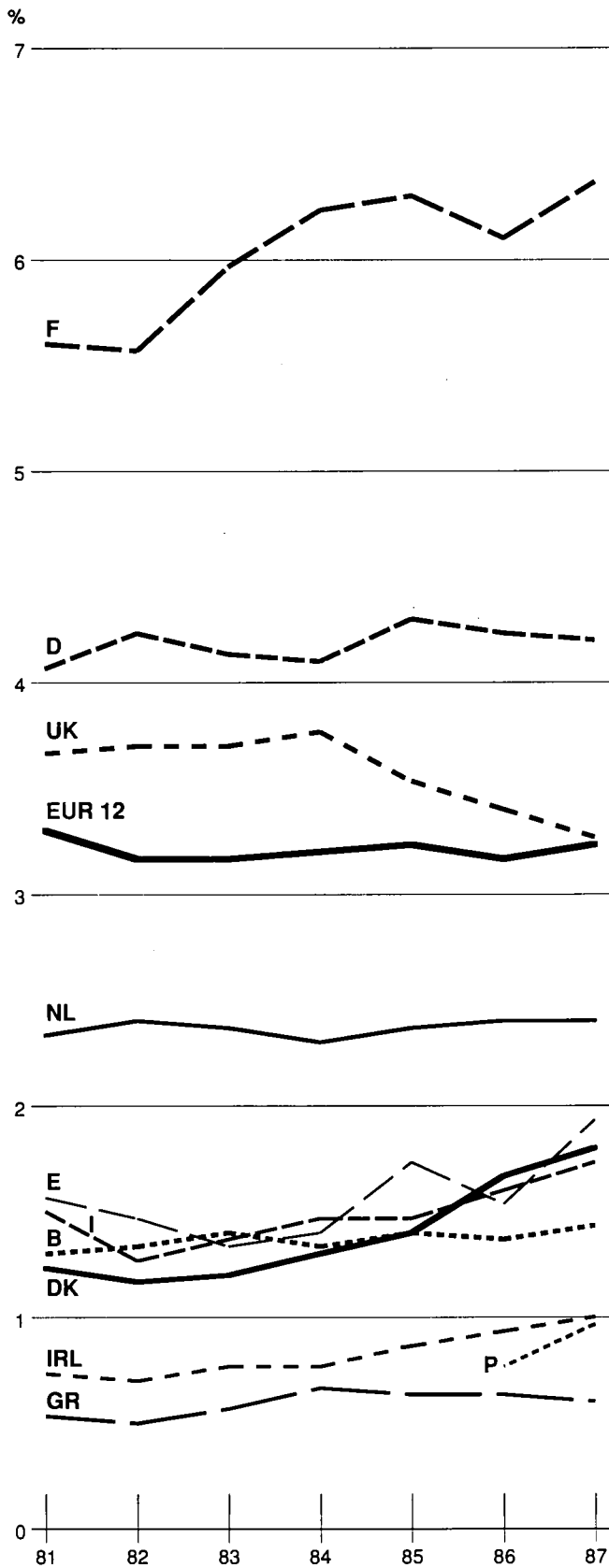
2.4.3. *Trends in the ratio of R & D budget appropriations to total budgets and to gross domestic product*

In 1987 the ratio of R & D budget appropriations to GDP increased in Spain and Portugal, and also in Italy and Denmark, continuing the average trend observed throughout the period 1981-87.

Two countries, Germany and the United Kingdom, have had a strong influence on the stability of this ratio at Community level.

Graph G

Trends in the ratio of R & D budget appropriations to total budget



Trends in the ratio of R & D budget appropriations to GDP

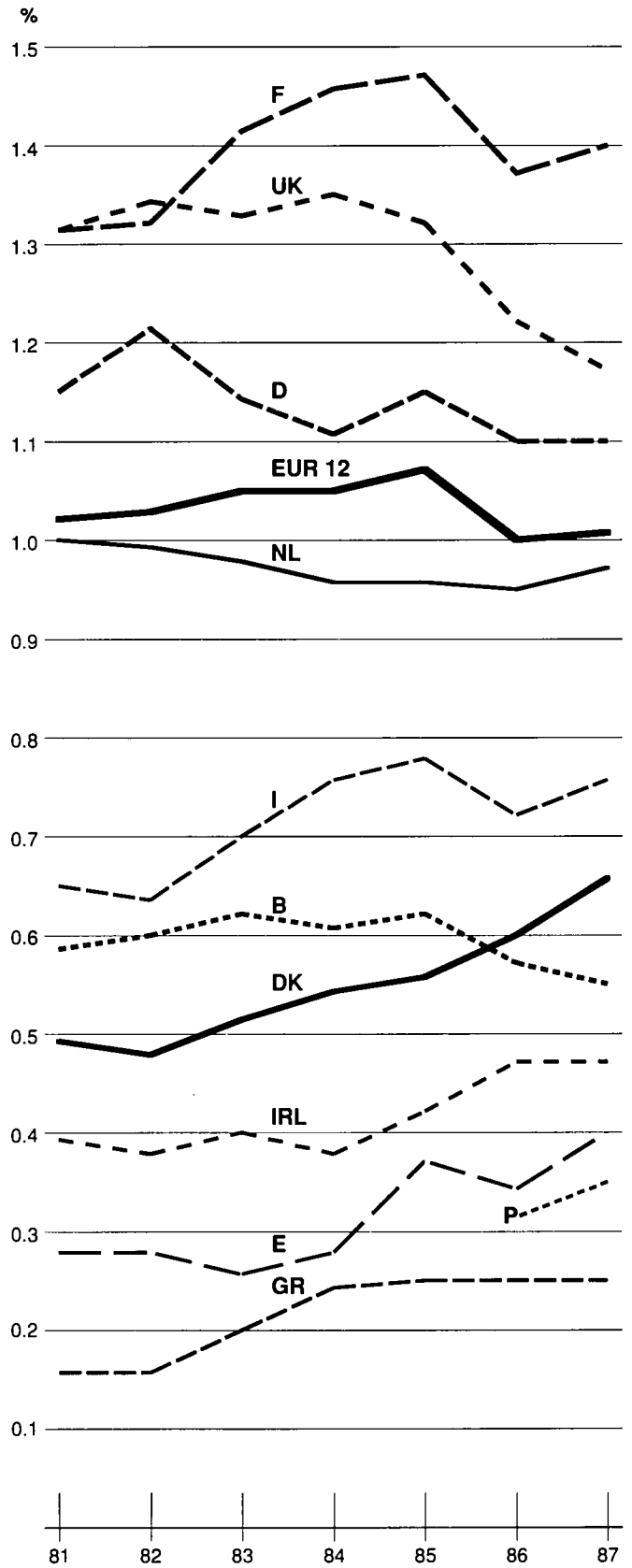


Table I

General characteristics of budget appropriations for R&D in 1987

	Government R&D appropriations in 1987 at current values and exchange rates (million ECU)		Government R&D appropriations at 1980 prices and purchasing power parities				Ratio of government R&D appropriations to total budget		Ratio of government R&D appropriations to gross domestic product			
			Annual average rate of change		Contribution of Member States to the EUR 12 total							
			Annual average rate of change (%)		Contribution of Member States to the EUR 12 total (%)		Ratio of government R&D appropriations to total budget (%)		Ratio of government R&D appropriations to gross domestic product (%)			
	Total	Civil	Total		Civil		1981 ²	1987	1981	1987	1981	1987
		1981-87	1987-88 ¹	1981-87	1987-88 ¹							
Belgium	668	661	0.7	0.3	0.6	0.7	2.0	1.9	1.31	1.41	0.59	0.55
Denmark	582	580	7.9	12.5	7.9	12.5	0.9	1.2	1.36	1.63	0.49	0.66
Germany	10 633	9 278	0.8	- 2.2	0.1	- 2.2	26.9	24.2	4.06	4.20	1.15	1.10
Greece	104	102	8.8	2.3	9.7	2.9	0.3	0.4	0.51	0.61	0.16	0.25
Spain	1 003	917	8.8	15.9	8.1	- 5.1	2.6	3.3	:	1.77	:	0.40
France	10 470	6 862	2.8	3.9	- 1.1	- 1.1	26.2	26.5	5.62	6.03	1.31	1.38
Ireland	121	121	5.2	-11.3	5.2	-11.3	0.3	0.3	0.74	0.88	0.39	0.48
Italy	4 965	4 616	7.7	19.3	7.5	16.2	10.8	14.3	1.60	1.72	0.65	0.76
Netherlands	1 790	1 740	1.1	- 0.6	1.1	- 0.8	5.2	4.8	2.34	2.39	0.93	0.96
Portugal	111	111	:	8.7	:	8.7	0.3	0.6	:	0.96	:	0.36
United Kingdom	6 824	3 388	1.2	- 0.6	1.8	6.4	24.4	22.5	3.18	2.76	1.31	1.19
EUR 12	37 270	28 374	2.7	3.7	3.0	2.5	100.0	100.0	3.33	3.06	1.02	1.01
European Communities	817	817	:	:	:	:	:	:	:	:	:	:

¹ Comparison of provisional budgets.

² Estimate.

3. CHANGES IN THE STRUCTURE OF R&D BUDGET APPROPRIATIONS BY OBJECTIVES

Because of the different share of R&D appropriations going to defence in the Community countries, a distinction will be made here between civil and defence R&D appropriations.

3.1. Changes in the structure of total R&D appropriations

The importance of defence in total government R&D financing differs greatly from one country to another, but one feature is common to all of them: the largest single amount of their financing goes to objectives 10 (research financed from general university funds) and 11 (non-oriented research). For EUR 12, one-third of total government R&D spending in 1987 went to these types of research, with university research accounting for 22% and non-oriented research 11%.

As shown in Table V, two countries spent approximately the Community average on research financed from general university funds: Belgium and Spain. Most of the others allocated a higher percentage: the Netherlands (41%), Portugal (37%), Denmark, Germany and Italy (30-32%) and Greece and Ireland (27-28%). Only the United Kingdom and France (16%) fell below the Community average. Although this is partly due to the importance of defence research in those countries, another factor, at least in France, is the predominance of non-oriented research which accounts for 16% of France's total government appropriations for R&D. This is due to the fact that in France non-oriented research includes the activities of the National Scientific Research Council (CNRS), about 40% of whose research scientists are in higher education.

Table II

EUR 12: Government R & D appropriations classified by groups of objectives¹

%

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2 - 3 - 4 - 8 Human and social objectives	8.4	9.1	8.5	9.1
1 - 5 - 7 - 9 Technological objectives	29.1	28.7	28.5	27.8
6 Agriculture	4.0	3.8	3.9	3.7
10 Research financed from general university funds	22.5	22.5	23.1	22.6
11 Non-oriented research	11.2	11.3	11.1	11.2
12 Unclassified	0.9	0.9	1.0	0.8
13 Defence	24.0	23.9	24.0	24.8
Total	100.0	100.0	100.0	100.0

¹ Based on the ecu.

This table shows the very stable structure of Community R & D appropriations for groups of objectives.

This stability is particularly apparent within the group of social and human objectives.

Within the technological objectives group, however, appropriations for energy research fell in absolute terms (6.3 % in 1987 as against 7.6 % in 1986). Most of the Member States have been affected by this relative decline. Only Denmark and Greece increased their energy R & D spending, though by less than total research budget spending. Appropriations for space research, on the other hand, have increased in all Member States faster or at least at a similar rate to that of the total Community average, although the trend in this area is dictated more by multilateral cooperation programmes than by national R & D policies. Similarly, the increase in the industrial research objective is bigger than the Community average in all countries except for Belgium and the United Kingdom.

The slight fall in the share of total Community R & D appropriations accounted for by agriculture was mainly evident in the two countries that give priority to this type of research, namely Greece (24.7 % in 1986, 21.8 % in 1987) and Ireland (23.8 % in 1986, 20.4 % in 1987).

Defence appropriations, which remained relatively static as a percentage of total R & D appropriations, will be examined in Section 3.3.

3.2. Changes in the structure of civil R & D spending

Overall, government financing of civil R & D accounts for approximately three-quarters of the total Community research budget but the percentage varies greatly from one country to another: Ireland and Portugal (100 %); Netherlands, Belgium, Denmark and Greece (over 95 %); Germany and Spain (approximately 90 %); France (66 %) and the United Kingdom (50 %) (see Table V).

The breakdown of appropriations is as follows for the Community as a whole:

Table III

EUR 12: Government appropriations for civil R & D classified by objectives¹

NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
1. Exploration and exploitation of the earth	2.5	2.6	2.5	2.7
2. Infrastructures and general land-use planning	2.2	2.0	2.1	2.1
3. Control of environmental pollution	2.3	2.5	2.5	2.5
4. Protection and improvement of human health	4.6	5.2	4.7	5.4
5. Production, distribution and rational utilization of energy	10.1	8.3	8.4	7.6
6. Agricultural productivity and technology	5.2	5.0	5.1	4.9
7. Industrial productivity and technology	19.1	19.5	19.1	18.9
8. Social structures and relationships	2.0	2.1	1.9	2.1
9. Exploration and exploitation of space	6.6	7.3	7.5	7.8
10. Research financed from general university funds	29.6	29.5	30.4	30.0
11. Non-oriented research	14.7	14.9	14.6	15.0
12. Other civil research	1.1	1.1	1.3	1.0
Total civil R & D financing	100.0	100.0	100.0	100.0

¹ Based on the ecu.

Leaving aside Chapters 10 and 11, examined in the previous paragraph, the stability of the structure of R & D budget appropriations observed in Section 3.2 is again in evidence; energy, industry and space were the only areas where the growth rate differed somewhat from the growth in Community appropriations as a whole.

The declining share of total R & D appropriations accounted for by energy research, which is common to most Member States, is primarily due to the reduced funding for nuclear fission programmes in those countries involved in this type of research or for programmes on the rational use of energy, as in Ireland.

The increased share of the industrial productivity and technology objective is a feature of all countries except Belgium and the United Kingdom, where appropriations have declined in absolute terms in virtually every industrial sector. A particular feature to note in the other countries is the marked increase in appropriations for aircraft construction in Germany (up 19 % in 1987) and, in Italy, the sharp increase in appropriations for the chemical industry (up 62 %) and other manufacturing industries under NABS subsection 7.9 (up 310 %).

The increase in appropriations for space research is particularly evident in Spain, where the growth primarily concerns national programmes, and in Ireland, where research is carried out under multinational programmes only.

3.3. Changes in the structure of defence spending

Military research, which in 1987 accounted for almost one-quarter of total R&D budget appropriations, is concentrated mainly in four countries:

Table IV
Defence as a percentage of total government financing for R & D

Country	Final budgets		Provisional budgets	
	1986	1987	1987	1988
United Kingdom	50.8	50.3	51.2	47.8
France	32.9	34.5	34.2	37.6
Federal Republic of Germany	12.1	12.7	12.5	12.5
Italy	8.5	7.0	7.8	10.2
EUR 12 ¹	24.0	23.9	23.9	24.8

¹ Based on the ecu.

The lack of change in the proportion allocated to defence research in the Community as a whole despite the relative increases in national ratios is a result of the exchange rate movements between 1986 and 1987 in the two Member States most directly concerned, the United Kingdom and France.

Two countries in particular increased their defence appropriations between 1986 and 1987: France (up 10 %) and Germany (up 8.6 %). The United Kingdom's defence appropriations in the same year rose by only 4 %, while Italy's fell temporarily but should show a very marked increase in 1988.

Table V

Breakdown of final R&D budgets by objectives in 1986 and 1987

%

NABS objectives	EC		EUR 12		B		DK		D		GR		E	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
1. Exploration and exploitation of the earth	0.8	0.8	1.9	2.0	3.9	3.8	1.6	1.5	2.0	1.9	7.0	7.4	5.5	8.6
2. Infrastructures and general land-use planning	1.2	3.3	1.6	1.6	0.8	0.7	2.2	2.0	1.9	1.9	0.3	0.2	3.2	2.7
3. Control of environmental pollution	6.0	5.5	1.8	1.9	2.3	2.3	1.0	1.3	3.2	3.4	2.7	2.0	0.4	1.9
4. Protection and improvement of human health	4.1	3.3	3.5	4.0	3.1	2.9	6.0	4.8	3.1	3.3	7.5	7.5	3.4	9.4
5. Production, distribution and rational utilization of energy	56.2	46.8	7.7	6.3	10.2	9.7	5.0	4.6	10.4	8.8	6.0	5.4	10.6	4.3
6. Agricultural productivity and technology	1.9	2.2	4.0	3.8	7.4	7.4	7.7	8.8	2.0	2.0	24.7	21.8	5.3	6.4
7. Industrial productivity and technology	26.6	33.3	14.5	14.8	14.2	12.9	16.1	17.0	14.6	15.6	9.4	11.1	17.4	19.7
8. Social structures and relationships	0.8	1.1	1.5	1.6	0.7	0.5	4.5	4.3	2.3	2.5	6.5	6.7	0.9	0.9
9. Exploration and exploitation of space	1.0	1.3	5.0	5.6	7.7	9.9	2.8	2.6	4.5	5.0	0.3	0.3	2.1	5.7
10. Research financed from general university funds	-	-	22.5	22.5	22.8	22.4	33.5	31.7	31.6	29.9	26.5	28.4	22.1	19.7
11. Non-oriented research	1.3	2.4	11.2	11.3	23.2	24.1	19.2	21.2	12.2	12.8	6.0	6.6	22.3	8.8
12. Other research	-	0.0	0.9	0.9	2.1	2.4	-	-	0.1	0.1	0.3	0.4	2.0	3.4
Total financing of civil R&D	100.0	100.0	76.0	76.1	98.4	98.9	99.6	99.6	87.9	87.3	97.3	98.1	95.2	91.5
13. Defence	-	-	24.0	23.9	1.6	1.1	0.4	0.4	12.1	12.7	2.7	1.9	4.8	8.5
Total financing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

	F		IRL		I		NL		P		UK		NABS objectives
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	
	1.9	1.8	0.6	0.2	1.3	1.4	0.6	0.6	10.9	9.1	1.8	1.7	1. Exploration and exploitation of the earth
	1.1	1.1	3.9	2.7	1.0	0.6	4.2	4.6	11.6	6.1	1.5	1.5	2. Infrastructures and general land-use planning
	1.1	0.9	0.9	1.7	0.9	1.5	3.1	3.1	2.9	3.5	1.0	1.0	3. Control of environmental pollution
	3.0	3.3	4.5	4.6	5.0	5.8	2.7	2.5	0.2	3.1	3.8	4.3	4. Protection and improvement of human health
	4.6	4.3	1.2	0.9	15.2	10.1	4.1	4.0	4.6	3.1	4.0	3.5	5. Production, distribution and rational utilization of energy
	4.3	4.4	23.8	20.4	3.9	2.8	4.5	4.3	17.6	15.2	4.6	4.2	6. Agricultural productivity and technology
	14.0	13.4	28.9	29.0	21.3	22.4	17.3	17.6	6.9	16.4	9.8	8.7	7. Industrial productivity and technology
	0.6	0.5	9.8	9.2	1.2	1.7	2.6	2.4	1.1	1.8	1.3	1.5	8. Social structures and relationships
	7.0	6.9	1.9	2.7	6.5	8.8	3.1	2.8	-	-	2.6	2.7	9. Exploration and exploitation of space
	12.5	12.1	22.4	26.5	27.1	30.3	41.0	40.7	32.3	37.7	15.3	15.6	10. Research financed from general university funds
	15.9	15.9	2.2	2.1	6.6	6.2	9.9	10.3	0.6	2.2	3.0	4.6	11. Non-oriented research
	1.1	0.9	-	-	1.2	1.3	3.9	4.4	11.3	1.8	0.3	0.3	12. Other research
	67.1	65.5	100.0	100.0	91.5	93.0	97.2	97.2	100.0	100.0	49.1	49.7	Total financing of civil R&D
	32.9	34.5	-	-	8.5	7.0	2.8	2.8	-	-	50.9	50.3	13. Defence
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Total financing

Table VI

Breakdown of provisional R&D budgets by objectives in 1987 and 1988

%

NABS objectives	EC		EUR 12		B		DK		D		GR	
	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988
1. Exploration and exploitation of the earth	0.7	0.5	1.9	2.1	3.1	3.8	1.5	1.5	1.9	2.2	7.1	7.0
2. Infrastructures and general land-use planning	0.6	3.2	1.6	1.5	0.7	0.7	2.3	2.0	1.9	1.8	0.3	0.3
3. Control of environmental pollution	5.3	4.8	1.9	1.9	2.3	2.3	1.3	1.8	3.3	3.4	2.1	2.9
4. Protection and improvement of human health	2.8	4.3	3.6	4.1	3.0	2.6	4.8	4.6	3.2	3.6	7.4	8.6
5. Production, distribution and rational utilization of energy	51.6	34.8	6.4	5.8	9.5	9.0	4.4	4.0	8.7	7.8	3.6	2.9
6. Agricultural productivity and technology	1.5	2.8	3.9	3.7	7.6	6.5	8.5	8.5	2.0	2.1	26.0	24.8
7. Industrial productivity and technology	33.2	43.7	14.5	14.2	12.8	13.7	16.2	17.4	15.3	14.6	11.2	13.7
8. Social structures and relationships	1.1	0.8	1.5	1.6	0.5	0.5	3.7	5.5	2.3	2.5	7.4	7.8
9. Exploration and exploitation of space	1.5	2.3	5.7	5.9	9.9	10.4	2.6	2.4	4.9	5.4	0.4	0.3
10. Research financed from general university funds	-	-	23.1	22.6	22.3	21.6	32.1	29.0	31.5	30.8	25.3	24.9
11. Non-oriented research	1.8	2.6	11.1	11.2	23.6	25.3	22.3	22.9	12.3	13.3	6.7	4.5
12. Other research	-	0.0	1.0	0.8	3.8	3.0	-	-	0.1	0.1	0.2	0.4
Total financing of civil R&D	100.0	100.0	76.0	75.2	98.9	99.3	99.6	99.6	87.5	87.5	97.7	98.2
13. Defence	-	-	24.0	24.8	1.1	0.7	0.4	0.4	12.5	12.5	2.3	1.8
Total financing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table VI (continued)
Breakdown of provisional R & D budgets by objectives in 1987 and 1988

%

E		F		IRL		I		NL		P		UK		NABS objectives
1987	1988	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988	
7.7	6.5	1.8	1.7	0.6	0.2	1.4	1.5	0.6	0.6	9.0	10.5	1.7	2.1	1. Exploration and exploitation of the earth
0.2	3.6	1.1	1.0	4.2	2.0	0.8	0.8	4.6	4.5	10.5	4.6	1.6	1.6	2. Infrastructures and general land-use planning
2.0	1.7	0.9	0.7	0.9	2.0	0.9	1.7	3.1	3.1	3.4	3.1	1.5	1.1	3. Control of environmental pollution
8.6	7.7	3.9	3.2	4.5	5.3	4.5	5.8	2.5	2.5	0.2	3.3	3.3	4.4	4. Protection and improvement of human health
3.1	2.5	4.3	4.0	1.0	0.8	11.1	9.0	4.0	3.5	4.7	2.1	3.6	3.9	5. Production, distribution and rational utilization of energy
6.7	6.1	4.4	4.1	24.1	16.5	3.5	2.5	4.3	4.3	14.2	15.3	4.3	4.4	6. Agricultural productivity and technology
21.5	18.0	13.4	12.4	27.1	28.5	19.1	20.2	17.7	18.6	6.2	14.9	9.9	9.7	7. Industrial productivity and technology
0.9	0.8	0.5	0.5	9.9	10.2	1.2	1.5	2.4	2.4	1.3	1.9	1.2	1.4	8. Social structures and relationships
8.8	6.5	6.9	7.0	2.3	3.2	9.3	9.1	2.8	3.3	-	-	2.6	2.8	9. Exploration and exploitation of space
19.8	19.1	12.1	11.7	23.0	29.4	31.9	31.4	40.7	39.0	30.5	34.2	15.3	15.7	10. Research financed from general university funds
8.5	11.9	15.9	15.1	2.4	1.9	6.6	5.8	10.3	10.9	0.5	0.9	3.3	4.8	11. Non-oriented research
3.4	3.5	0.9	0.9	-	-	1.9	0.5	4.4	4.2	19.5	9.2	0.3	0.3	12. Other research
91.1	88.1	34.5	62.4	100.0	100.0	92.2	89.8	97.2	97.0	100.0	100.0	48.8	52.2	Total financing of civil R&D
8.9	11.9	65.5	37.6	-	-	7.8	10.2	2.8	3.0	-	-	51.2	47.8	13. Defence
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Total financing

Table VII

Breakdown of final budgets for civil R&D by objectives in 1986 and 1987 (% of total civil R&D)

NABS objectives	EC		EUR 12		B		DK		D		GR	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
1. Exploration and exploitation of the earth	0.8	0.8	2.5	2.6	4.0	3.8	1.6	1.5	2.3	2.2	7.2	7.6
2. Infrastructures and general land-use planning	1.2	3.3	2.2	2.0	0.8	0.7	2.3	2.0	2.1	2.2	0.3	0.3
3. Control of environmental pollution	6.0	5.5	2.3	2.5	2.4	2.3	1.0	1.3	3.7	3.9	2.7	2.0
4. Protection and improvement of human health	4.1	3.3	4.6	5.2	3.2	2.9	6.1	4.9	3.5	3.8	7.7	7.7
5. Production, distribution and rational utilization of energy	56.2	46.8	10.1	8.3	10.4	9.8	5.0	4.6	11.8	10.1	6.2	5.5
6. Agricultural productivity and technology	1.9	2.2	5.2	5.0	7.5	7.5	7.8	8.8	2.3	2.3	25.4	22.3
7. Industrial productivity and technology	26.6	33.3	19.1	19.5	14.4	13.0	16.2	17.0	16.6	17.9	9.6	11.3
8. Social structures and relationships	0.8	1.1	2.0	2.1	0.7	0.5	4.5	4.4	2.6	2.8	6.7	6.9
9. Exploration and exploitation of space	1.0	1.3	6.6	7.3	7.8	10.1	2.8	2.6	5.1	5.7	0.4	0.3
10. Research financed from general university funds	-	-	29.6	29.5	23.2	22.6	33.7	31.8	35.9	34.3	27.2	29.0
11. Non-oriented research	1.3	2.4	14.7	14.9	23.5	24.4	19.3	21.2	13.9	14.7	6.2	6.7
12. Other research	-	0.0	1.1	1.1	2.2	2.4	-	-	0.2	0.2	0.3	0.4
Total financing of civil R&D	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

4. SPECIAL FEATURES OF GOVERNMENT R & D FINANCING IN EACH MEMBER STATE

4.1. Belgium

4.1.1. Total R & D financing in the national budget was BFR 28 800 million in 1987, 200 million up on 1986 reflecting a 0.8% increase in nominal terms. With the GDP implicit price index up by 1.9% over the same period, this means that there was a fall in real terms of 1%.

To judge from the comparison of provisional budgets, this downward trend in appropriations in real terms is unlikely to continue in 1988, being replaced by a slight upturn.

It should be noted, however, that the devolution to the regional executives of responsibility for the bulk of R&D spending in 1989-90 is very likely to disrupt the procedures for drawing up the budget and, by extension, the rules for evaluating appropriations for R&D, both nationally and regionally. Furthermore, it may well prove extremely difficult, if not impossible, to draw comparisons in years to come between data collected after that time and those collected in preceding years.

4.1.2. A study by objectives of the variations recorded between 1986 and 1987 gives the following breakdown on either side of the increase in R & D prices (1.9%):

Table VII

Breakdown of final budgets for civil R&D by objectives in 1986 and 1987 (% of total civil R&D)

E		F		IRL		I		NL		P		UK		NABS objectives
1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	
5.8	9.4	2.9	2.8	0.6	0.2	1.5	1.5	0.6	0.6	10.9	9.1	3.6	3.5	1. Exploration and exploitation of the earth
3.3	3.0	1.7	1.6	3.9	2.7	1.1	0.6	4.4	4.7	11.6	6.1	3.1	3.1	2. Infrastructures and general land-use planning
0.4	2.0	1.6	1.3	0.9	1.7	1.0	1.7	3.2	3.1	2.9	3.5	2.1	2.0	3. Control of environmental pollution
3.5	10.3	4.5	5.1	4.5	4.6	5.5	6.2	2.8	2.6	0.2	3.1	7.8	8.6	4. Protection and improvement of human health
11.2	4.7	6.9	6.6	1.2	0.9	16.6	10.9	4.2	4.1	4.6	3.1	8.2	7.1	5. Production, distribution and rational utilization of energy
5.6	7.0	6.5	6.7	23.8	20.4	4.3	3.0	4.7	4.4	17.6	15.2	9.3	8.5	6. Agricultural productivity and technology
18.3	21.5	20.8	20.5	28.9	29.0	23.3	24.1	17.8	18.2	6.9	16.4	20.0	17.5	7. Industrial productivity and technology
0.9	1.0	0.9	0.8	9.8	9.2	1.3	1.8	2.7	2.5	1.1	1.8	2.7	3.0	8. Social structures and relationships
2.2	6.3	10.5	10.6	1.9	2.7	7.1	9.5	3.2	2.9	-	-	5.2	5.5	9. Exploration and exploitation of space
23.2	21.5	18.7	18.4	22.4	26.5	29.6	32.6	42.2	41.9	32.3	37.7	31.2	31.4	10. Research financed from general university funds
23.4	9.6	23.7	24.3	2.2	2.1	7.2	6.7	10.2	10.6	0.6	2.2	6.2	9.3	11. Non-oriented research
2.1	3.7	1.6	1.4	-	-	1.4	1.4	4.0	4.5	11.3	1.8	0.6	0.6	12. Other research
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Total financing of civil R&D

Nominal rate of change (1986/85)
%

(a) Objectives with a nominal growth equal to or greater than the rise in the implicit price index

9 – Exploration and exploitation of space	30
11 – Non-oriented research	5

(b) Objectives with a nominal growth below the rise in the implicit price index

6 – Agricultural productivity and technology	1
All objectives	1
3 – Control of environmental pollution	- 1
10 – Research financed from general university funds	- 1
1 – Exploration and exploitation of the earth	- 2
5 – Production, distribution and rational use of energy	- 4
4 – Protection and improvement of human health	- 5
2 – Infrastructure and general planning of land use	- 7
7 – Industrial productivity and technology	- 8
13 – Defence	- 33
8 – Social structures and relationships	- 34

The fall in real terms in Belgian government R&D appropriations in 1987 reflects, in practice, a wide scatter of variations on either side of the average.

Space is the only area where there was a marked increase, owing to the multilateral cooperation programmes. At the same time, the increase in appropriations for non-oriented research, which accounted for nearly one-quarter of total government appropriations for R&D (the highest percentage in the Community), testifies to the desire not to abandon basic research.

Funding has decreased in real terms for all the other objectives.

Overall, however, these marked variations have had no more than a moderate impact on the breakdown of government financing by groups of objectives shown in the following table:

Table VIII-1
Government R & D financing classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	6.9	6.4	6.4	6.1
1-5-7-9 Technological objectives	36.0	36.3	35.2	36.9
6 Agriculture	7.4	7.4	7.6	6.5
10 Research financed from general university funds	22.8	22.4	22.3	21.6
11 Non-oriented research	23.2	24.1	23.6	25.3
12 Unclassified research	2.1	2.4	3.8	3.0
13 Defence	1.6	1.1	1.1	0.7
Total	100.0	100.0	100.0	100.0

4.2. Denmark

4.2.1. In 1987 Danish R&D appropriations totalled DKR 4 585 million, which was 549 000 million more than in 1986, giving a nominal increase of 13.6%. As the GDP implicit price index rose by 5.6% in the same period, government R&D spending increased in real terms by 7.8%. This is in line with the trend recorded over the past few years.

A comparison of provisional budgets for 1987 and 1988 indicates that this trend is likely to continue or even to strengthen.

4.2.2. On the basis of an analysis of the annual variations in objectives, they can be classified in two groups on either side of the increase in the GDP implicit price index (5.4%):

Nominal rate of change (1987/86)
%

(a) Objectives with a nominal growth equal to or greater than the rise in the implicit price index

3 - Control of environmental pollution	42
6 - Agricultural productivity and technology	29
11 - Non-oriented research	25
7 - Industrial productivity and technology	20
All objectives	14

8 – Social structures and relationships	11
10 – Research financed from general university funds	7
1 – Exploration and exploitation of the earth	6
9 – Exploration and exploitation of space	6

(b) **Objectives with a nominal growth below the rise in the implicit price index**

5 – Production, distribution and rational utilization of energy	5
13 – Defence	2
2 – Infrastructure and general planning of land use	0
4 – Protection and improvement of human health	- 9

The social and human objectives present picture, with the appropriations for the Chapters on the environment and social structures showing a very marked increase while those for lands-use planning and health remained stable or even declined.

At the same time the proportion of total appropriations accounted for by the technological objectives increased, chiefly as a result of the increase in funding to industry.

Research and general university funds showed a moderate increase relative to the increase in appropriations for non-oriented research.

The following table shows the structural comparison by groups of objectives, highlighting these variations:

Table VIII-2

Government R & D financing classified by groups of objectives

Groups of NABS objectives	%			
	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	13.7	12.3	12.0	13.9
1-5-7-9 Technological objectives	25.4	25.7	24.7	25.3
6 Agriculture	7.7	8.8	8.5	8.5
10 Research financed from general university funds	33.5	31.7	32.1	29.0
11 Non-oriented research	19.2	21.2	22.3	22.9
12 Unclassified research	—	—	—	—
13 Defence	0.4	0.4	0.4	0.4
Total	100.0	100.0	100.0	100.0

4.3. Federal Republic of Germany

4.3.1. General trends in R & D expenditure

The final budgets of the Federal and *Länder* governments for 1987 show R & D appropriations in the Federal Republic of Germany of DM 22 000 million. This was an increase of 3 % in nominal terms over 1986 (DM 21 400 million). It should be noted, however, that only a limited comparison of the results of these two years is possible because of a change in 1987 in the method of drawing up the final budget and the preparation of the 1988 provisional budget, although only research financed from general university funds (Chapter 10) is affected. After correcting the figures for the two reference years in line with the new method, the nominal increase in R & D appropriations in the final budget for 1987 over the final budget for 1986 is 5.1 %. This corresponds to a growth of 3.3 % in real terms, after allowing for the GDP implicit price index.

Expenditure on R & D in 1988, based on the provisional budgets of the Federal and *Länder* governments, comes to DM 22 200 million. When the R & D appropriations in the provisional budget for 1987 are corrected using the new method for calculating the financing from general university funds mentioned above, the nominal increase in R & D appropriations in 1988 over 1987 is found to be 1.3%, which is tantamount to no change at all in real terms.

The figures for the reference years used as a basis for the comparative analysis of R & D appropriations for the target groups have been revised (see table). The unrevised figures show the following pattern for the various groups: there was an increase from 1986 to 1987 (final budgets) in the proportion of R & D appropriations spent on human and social objectives, non-oriented research and military research, whereas technological objectives, university research and agriculture showed a decline. Comparison of the provisional budgets for 1987 and 1988 also reveals an expansion in the share of human and social objectives and non-oriented research. The proportion spent on university research and agriculture also increased over this period. There was a drop, on the other hand, in the share of technological and military research (see table).

Table VIII-3
Government R & D financing classified by groups of objectives

Groups of objectives (NABS 1983)	Final budgets		Provisional budgets	
	1986 ¹	1987	1987 ¹	1988
2 - 3 - 4 - 8 Human and social objectives	(10.7)	11.0	(10.9)	11.3
1 - 5 - 7 - 9 Technological objectives	(32.1)	31.3	(31.5)	30.0
6 Agriculture	(2.1)	2.0	(2.0)	2.1
10 Research financed from general university funds	(30.2)	29.9	(30.1)	30.8
11 Non-oriented research	(12.5)	12.8	(12.6)	13.3
12 Unclassified	(0.1)	0.1	(0.1)	0.1
13 Defence	(12.4)	12.7	(12.8)	12.5
Total	100.0	100.0	100.0	100.0

¹ Owing to the changes in the method of establishing the budget allocation to university research (1988 revision), the percentages shown in this table for 1987 (final) and 1988 (provisional) respectively cannot be compared with previously published figures for the corresponding budgets in 1986 and 1987. Consequently the revised figures for 1986 (final) and 1987 (provisional) are shown here in brackets so as to provide comparable percentage figures for all the target groups. In absolute figures however, the only chapter affected by the change is Chapter 10.

The decline in technology research spending, both from 1986 to 1987 in the final budgets and from 1987 to 1988 in the provisional budgets, can largely be attributed to the drop in Chapter 5 expenditure (production, distribution and rational utilization of energy). These trends disguise the marked expansions under other chapters in this sector. Research financed from general university funds and technological objectives are the two areas where most government-funded R & D expenditure is concentrated. These two combined account for over 60% of total appropriations during the years under review.

4.3.2. R & D expenditure by chapter headings

The trends in spending in the various chapters are described below.

Chapter 1

The final figures for appropriations allocated to exploration and exploitation of the earth show a slight decline between 1986 and 1987 (- 4%). The provisional figures for 1988 indicate a sharp increase over the previous year (+ 13.3%). The main reason for this upwards trend is the increased spending on earth science (1.1). Subsection 1.0 accounts for the bulk of spending under this chapter.

Chapter 2

Although R & D expenditure on infrastructures and land-use planning are up 5.2 % over 1986 according to the 1987 final budget, in 1988 there is expected to be a 5.8 % drop in appropriations (provisional budget) compared with 1987.

The main contributor to this increase is investment in ground-based transport systems and traffic (2.4) which rose strongly in 1987, but which has fallen back again in 1988. Transport systems continue to be the focus of this chapter.

Chapter 3

Exceptionally high increases in R & D expenditure on control of environmental pollution are evident, both in the final figures between 1986 and 1987 (+ 7.9 %) and the provisional figures from 1987 to 1988 (+ 3.1 %). The increase in spending by the Federal and *Länder* governments from 1986 to 1987 affects virtually every section of this chapter. Ecological research (3.0) accounts for the bulk of the increase in the provisional budget for this chapter, while the pattern in the other sectors is mixed. The focus of this chapter is Section 3.0.

Chapter 4

There has also been exceptional expansion in R & D spending on the protection and improvement of health, which increased from 1986 to 1987 (final budget) by 10.1 %. For 1988 the provisional budget figures predict an increase of 10.6 % over 1987. The main reasons for this rise are the increase in appropriations for the promotion of research on AIDS and cancer (4.1) and increased spending in the field of biomedical engineering and medicines (4.3). All sections of this chapter broadly reflect this upward trend. The bulk of spending in this chapter is concentrated on 4.1 and 4.0.

Chapter 5

R & D expenditure on the production, distribution and rational utilization of energy has been characterized by a marked drop in spending on nuclear fission (e.g. development of reactor lines) dating back to 1985. Both the final figures for 1987 against 1986 and the provisional budgets for 1988 against 1987 also show sharp declines in funding (– 12.6 % and – 10.6 %). In addition to 5.2, subsection 5.1 has also seen a reduction in R & D expenditure. The bulk of spending in this chapter remains concentrated in 5.2.

Chapter 6

In the periods under review R & D expenditure on agricultural productivity and technology rose. The final budgets for 1987 over 1986 show this increase to be 3.7 %, while the provisional figures for 1988 over 1987 indicate a further increase of 4.3 %. All subsections of this chapter, apart from 6.4 and 6.6, benefited from these increases, but the biggest relative rise was in 6.9. The main focus of this chapter is crops research (6.4).

Chapter 7

As in previous years there has been continuing expansion of R & D spending on industrial productivity and technology, as a comparison of the final figures for 1987 over 1986 shows (+ 10.3 %). This trend, which is due to the significant increases in Federal and *Länder* government spending, applies to virtually all sections in this chapter of the NABS. The increase in appropriations has been exceptionally high, however, in the aircraft construction sector (7.5).

The provisional figures for 1988 show a drop of 5.8 % in R & D spending over the comparable figures for 1987. However, this decline is almost entirely due to the sometimes extremely large increases in appropriations in other sectors, such as data processing, and ground-based transport and traffic. Expenditure in this chapter is concentrated in 7.1, 7.2 and 7.5, which together account for over two-thirds of spending in Chapter 7.

Chapter 8

In the period under review there has been an exceptionally strong upward trend in this chapter (social structures and relationships), sometimes as a result of changes in the scope of the R & D performed by certain scientific establishments. The increase in the final figures for 1987 over 1986 (+ 11.5 %) mainly affects 8.3 and 8.0. There has been a decline, on the other hand, in 8.5 and 8.1. The provisional figures for 1988 indicate an increase of 8.7 % over 1987. Most expenditure in this chapter is concentrated in 8.1.

Chapter 9

Both final appropriations for 1987 compared with 1986 and the provisional figures for 1988 over 1987 reveal extremely high growth in R & D spending on the exploration and exploitation of space (+ 14.2 % and + 9.6 %). The final outturn figures reveal the biggest increases in subsections 9.4 (e.g. space laboratories and space travel) and 9.3 (launch systems). Funding fell slightly, on the other hand, in 9.1. The 1988 provisional figures point to an increase over 1987, which will benefit all subsections.

Chapter 10

A comparison of the final figures for 1986 and 1987 and of the provisional figures for 1988 and 1987 for this chapter has to take into account the change in the breakdown of R & D spending in universities which was introduced in 1988. This has a bearing on the figures for the latter year in both of the periods under review. The revision – based on the universities addendum to the Frascati manual – affects the method for determining both the appropriations for university clinics (practical medicine), although this has only a minimal quantitative impact, and the calculation of pension supplements throughout the university sector, as well as introducing some minor methodological changes.

Correction of the already published figures for 1986 (final) and 1987 (provisional) using the new method reveals the following trends. Research financed from general university funds, which chiefly come from the *Länder* government budgets, rose during the periods under review. The final figures for 1987 showed only a modest increase (+ 4.4 %) over 1986 and according to the provisional figures the increase from 1987 to 1988 is likely to be of the same order (+ 3.5 %). Most of the spending in this chapter is concentrated on mathematics and natural sciences (10.1).

Chapter 11

The growth of expenditure for non-oriented research has been well above average. On the final figures, the increase in R & D spending between 1986 and 1987 was 8.0 %. In the Federal Government sector, the main contributor has been research funding for the large research institutions (such as the Max-Planck-Gesellschaft). Within the chapter, the biggest rise was in the agricultural sciences (11.4). The provisional budget figures indicate that the expansion of R & D expenditure in this chapter between 1987 and 1988 will probably be 6.9 %, helped by an exceptionally large increase in *Länder* government funding. The focus within the chapter continues to be mathematics and natural sciences, which have seen an increase in their share of all government-funded R & D spending in the Federal Republic of Germany in the periods considered here; this subsection (11.1) accounts for close to 70 % of expenditure in this chapter.

Chapter 13

The final budget figures for 1986 compared with 1986 show a very marked increase (+ 8.4 %) in spending on defence research. The 1988 provisional figures suggest that, over 1987, there will have been a slight drop (– 0.9 %) in expenditure in this chapter.

4.4. Greece

4.4.1. In 1987 Greek R & D appropriations totalled DR 16 202 million, an increase of 2 555 million or 18.7 % in nominal terms over 1986. Deflated by the GDP implicit price index, budget appropriations increased by 2.7 % over the same period – a satisfactory result given that the two-year plan to stabilize the economy was still in force in 1987.

The difference between the provisional and final budgets for 1987 is basically due to the new restrictions imposed on government spending which makes up the bulk of funding for R&D projects.

A comparison of the provisional budgets for 1988 over 1987 suggests that there will be an increase of nearly 25 % in nominal terms and 2.3 % in real terms, which is less than during the preceding year. However, since the provisional figures for 1987 were considerably over-estimated, it is more likely that real growth will be of the order of 5 %.

4.4.2. The variations in government research funding give the following breakdown on either side of the probable rise (15.6 %) in the GDP implicit price index:

Nominal rate of change (1987/86)
%

(a) Objectives with a nominal growth equal to or greater than the rise in the implicit price index

7 – Industrial productivity and technology	41
11 – Non-oriented research	29
10 – Research financed from general university funds	27
1 – Exploration and exploitation of the earth	26
8 – Social structures and relationships	23
4 – Protection of improvement of human health	19
All objectives	19

(b) Objectives with a nominal growth below the rise in the implicit price index

5 – Production, distribution and rational utilization of energy	7
6 – Agricultural productivity and technology	5
9 – Exploration and exploitation of space	4
2 – Infrastructure and general planning of land use	1
3 – Control of environmental pollution	-11
13 – Defence	-16

The first point to note is the marked growth in appropriations for industrial productivity and technology, whose share of total expenditure rose from 9.4 % in 1986 to 11.1 % in 1987 and looks set to rise further in 1988. This is a more stable trend than in the past four years, and it means that the share of total R & D appropriations spent on this objective will have doubled in that time (from 6.1 % in 1984 to 13.7 % in 1988).

Another objective that has increased substantially is general university funds, whose share of total R & D spending rose from 26.5 % in 1986 to 28.4 % in 1987. This increase is primarily attributable to the Ministry of Education's special programme for education, which enabled universities to purchase laboratory equipment, stock their libraries and also finance research projects.

The trend is reversed in the case of agricultural productivity and technology, whose share has slipped from 26.9 % in 1984 to 24.7 % in 1986 and then to 21.8 % in 1987. A comparison of the provisional figures for 1987 and 1988 confirms this slowing-down in spending on this objective, which is a key sector in Greece, and signals a reversal of the trend observed in earli-

er years. In 1987 this was mainly due to the cuts in the Ministry of Agriculture's research budget, which – given that this ministry is responsible for 85 % of the funding for this objective – had a crucial impact.

Turning to the lesser objectives, the share of spending on environmental pollution and energy research declined, as a result of the imminent completion of the solar village project, as did the share of defence research spending.

These features are summarized in the following table:

Table VIII-4
Government R & D financing classified by groups of objectives

Groups of NABS objectives	%			
	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2 – 3 – 4 – 8 Human and social objectives	17.0	16.6	17.1	19.6
1 – 5 – 7 – 9 Technological objectives	22.7	24.3	22.3	23.9
6 Agriculture	24.7	21.8	26.0	24.8
10 Research financed from general university funds	26.5	28.4	25.3	25.0
11 Non-oriented research	6.0	6.6	6.7	4.5
12 Unclassified	0.3	0.4	0.2	0.4
13 Defence	2.7	1.9	2.3	1.8
Total	100.0	100.0	100.0	100.0

4.5. Spain

4.5.1. Spain's R&D appropriations amounted to PTA 143 000 million in 1987, 32 000 million more than in 1986, giving an increase in nominal terms of nearly 29 %. The GDP implicit price index rose by 6 % during that time, giving an increase of 22 % in R&D spending in real terms.

However, a comparison of the provisional figures for 1987 and 1988 indicates that there is likely to be an increase of the order of 16 % in real terms in 1988.

4.5.2. Since it is difficult to compare the figures for 1987 and 1988 broken down by objectives, a table showing the structure of R&D financing classified by groups of objectives will have to suffice:

Table VIII-5

Government R&D financing classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	7.9	14.9	11.7	13.8
1-5-7-9 Technological objectives	35.6	38.3	41.1	33.5
6 Agriculture	5.3	6.4	6.7	6.1
10 Research financed from general university funds	22.1	19.7	19.8	19.1
11 Non-oriented research	22.3	8.8	8.5	11.9
12 Unclassified research	2.0	3.4	3.4	3.5
13 Defence	4.8	8.5	8.9	11.9
Total	100.0	100.0	100.0	100.0

This table clearly illustrates the problems involved in comparison resulting from the variation in the percentage of non-oriented research, which was probably overestimated in the years prior to 1987.

Another feature is the sizeable share of total funding going to defence which is fairly close to the figure for Italy.

4.6. France

4.6.1. Government appropriations for R&D totalled FF 72 500 million in 1987, an increase of 3 600 million over 1986, giving a nominal rise of 5.2%. As the GDP implicit price index rose by 3.1% in the same period, this means that government R&D financing increased by 2% in real terms.

A comparison of provisional budgets for 1987 and 1988 shows a 3% increase in appropriations in real terms.

4.6.2. An examination by objectives of the variations in appropriations gives the following breakdown on either side of the increase in the GDP implicit price index (3.1%):

Nominal rate of change (1987/86)
%

(a) **Objectives with a nominal growth equal to or greater than the rise in the implicit price index**

4 - Protection and improvement of human health	18
13 - Defence	10
6 - Agricultural productivity and technology	7
11 - Non-oriented research	5
9 - Exploration and exploitation of space	4
All objectives	4

(b) **Objectives with a nominal growth below the rise in the implicit price index**

8 - Social structures and relationships	2
10 - Research financed from general university funds	2
7 - Industrial productivity and technology	1
1 - Exploration and exploitation of the earth	-1
5 - Production, distribution and rational utilization of energy	-2
2 - Infrastructure and general planning of land use	-2
3 - Control of environmental pollution	-20

Variations are scattered relatively widely on either side of the average increase in appropriations.

The most marked increases were in health, where spending was well up following the cutbacks in 1985, and defence.

Overall, the changes in the major groups of objectives are reflected in a slower rate of increase in appropriations for social and human objectives and technological objectives.

Spending on all social and human objectives declined sharply in absolute terms, except for the objective social structures and relationships which recorded a slight increase. The reduction in spending on the objective control of environmental pollution was due mainly to the reduction in Atomic Energy Commission spending on radiation research.

Similarly, apart from space, where appropriations are committed for several years, the funding allocated to technological objectives remained steady or even declined in absolute terms.

Table VIII-6
Government R & D financing classified by groups of objectives

Groups of NABS objectives	%			
	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	5.8	5.8	5.8	5.5
1-5-7-9 Technological objectives	27.5	26.4	26.4	25.1
6 Agriculture	4.3	4.4	4.4	4.1
10 Research financed from general university funds	12.5	12.1	12.1	11.7
11 Non-oriented research	15.3	15.9	15.9	15.2
12 Unclassified research	1.1	0.9	0.9	0.9
13 Defence	32.9	34.5	34.5	37.5
Total	100.0	100.0	100.0	100.0

4.7. Ireland

4.7.1. The Irish R & D budget in 1987 was IRL 93.8 million, almost 9 million up on 1986, giving a nominal increase of 10.4%. As the GDP implicit price index rose by 3.6% in the same period, R & D funding recorded an increase of 6.6% in the year under review.

A comparison of provisional data for 1987 and 1988 seems to indicate that there will be a decrease in government financing of R & D in 1988, reflecting the rationalization of government technology agencies which took place in 1988.

4.7.2. The variations in government R & D funding classified by objectives give the following breakdown on either side of the rise in R & D prices (3.6%):

(a) Objectives with a nominal growth equal to or greater than the rise in the implicit price index

3 - Control of environmental pollution	96
9 - Exploration and exploitation of space	59
10 - Research financed from general university funds	31
4 - Protection and improvement of human health	13
7 - Industrial productivity and technology	11
All objectives	10
11 - Non-oriented research	10
8 - Social structures and relationships	4

(b) Objectives with a nominal growth below the rise in the implicit price index

6 - Agricultural productivity and technology	- 5
5 - Production, distribution and rational utilization of energy	- 14
2 - Infrastructure and general planning of land use	- 24
1 - Exploration and exploitation of the earth	- 70

This breakdown highlights the wide scatter on either side of the average variation for all objectives, which is reflected to some extent in the classification by major groups of objectives:

Table VIII-7
Government R & D financing classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	19.1	18.2	19.1	19.5
1-5-7-9 Technological objectives	32.6	32.8	31.2	32.7
6 Agriculture	23.8	20.4	24.2	16.5
10 Research financed from general university funds	22.4	26.5	23.0	29.4
11 Non-oriented research	2.2	2.1	2.4	1.9
12 Unclassified research	-	-	-	-
13 Defence	-	-	-	-
Total	100.0	100.0	100.0	100.0

The slower rate of increase in human and social objectives relative to the overall increase in 1987 is primarily due to the drop in spending on the objectives of land-use planning and, more particularly, construction and planning of buildings. The increase in spending on the environment and more especially the prevention of water and air pollution is not enough to counteract this decline.

The relative lack of change in the technological objectives is the result of a mixed pattern with, on the one hand, a marked decline in the allocation for exploration and exploitation of the earth, energy research and, in particular, R & D on energy saving and, on the other, a significant increase in appropriations for industry and space, with funding for the latter coming under the heading of multi-lateral cooperation.

The reduction in the appropriations for agricultural research is all the more notable in view of the fact that Ireland and Greece are alone in devoting over one-quarter of their R & D funding to this area of research.

Lastly, it should be pointed out that the marked increase in the allocation to general university funds does not benefit either human sciences or agricultural research.

4.8. Italy

4.8.1. In 1987 government R & D financing totalled LIT 7 422 000 million, an increase of 978 000 million or 15.2% in nominal terms over 1986. As the GDP implicit price index rose by 5.4% over the same period, this is equivalent to a growth in real terms of 9.3% in that year. This substantial increase is in line with the very marked upward trend in government R & D spending recorded since 1982.

A comparison of provisional budgets for 1987 and 1988 indicates that this upward trend is likely to strengthen in 1988.

4.8.2. An examination by objectives of the annual variations gives the following breakdown on either side of the rise in the GDP implicit price index (5.4%):

Nominal rate of change (1987/86)
%

(a) Objectives with a nominal growth equal to or greater than the rise in the implicit price index	
3 - Control of environmental pollution	89
8 - Social structures and relationships	57
9 - Exploration and exploitation of space	56
4 - Protection and improvement of human health	33
10 - Research financed from general university funds	29
1 - Exploration and exploitation of the earth	23
7 - Industrial productivity and technology	21
All objectives	15
11 - Non-oriented research	8
(b) Objectives with a nominal growth below the rise in the implicit price index	
13 - Defence	- 5
6 - Agricultural productivity and technology	- 18
5 - Production, distribution and rational utilization of energy	- 24
2 - Infrastructure and general planning of land use	- 32

There is a wide range of variation on either side of the average variation, but it is relative since, except for energy, the large variations chiefly occur in the lesser objectives.

There was a marked increase in social and human objectives as a whole, with the emphasis on control of environmental pollution and social structures and relationships.

Appropriations for technological objectives, by contrast, declined as a percentage of total R & D financing, mainly because of the reduction in absolute terms in funding for energy research. Even though the ENEA (the main nuclear energy board) has diversified its research objectives, giving priority to nuclear fusion instead of fission, this decline nevertheless also affects general or unclassified research.

The very high growth in appropriations to general university funds can be ascribed in part to a statistical adjustment which affects all disciplines.

Finally, there was a significant drop in funding for agricultural research.

Table VIII-8

Government R&D funding classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	8.2	9.6	7.4	9.8
1-5-7-9 Technological objectives	44.4	42.7	40.9	39.8
6 Agriculture	3.9	2.8	3.5	2.5
10 Research financed from general university funds	27.9	30.3	31.9	31.4
11 Non-oriented research	6.6	6.2	6.6	5.8
12 Unclassified research	1.2	1.3	1.9	0.5
13 Defence	8.5	7.0	7.8	10.2
Total	100.0	100.0	100.0	100.0

4.9. Netherlands

4.9.1. In 1987 the Netherlands R&D budget came to HFL 4 177 million, 85 million more than the previous year, giving a nominal increase of 2%. As the GDP implicit price index fell by 1.7% in the same period, research appropriations increased by 3.8% in real terms, above the average taken over 1981-87.

Nevertheless a comparison of provisional budgets for 1987 and 1988 indicates that the appropriations are likely to fall slightly in real terms in 1988. However, the provisional budget for 1988 will definitely be less than the final budget for the year.

4.9.2. Classified by objectives, the annual variations give the following breakdown on either side of the increase in R&D prices (- 1.7%):

Nominal rate of change (1987/86)
%

(a) Objectives with a nominal growth equal to or greater than the rise in the implicit price index

2 - Infrastructure and general planning of land use	10
11 - Non-oriented research	6
7 - Industrial productivity and technology	4
13 - Defence	3
All objectives	2
10 - Research financed from general university funds	1
3 - Control of environmental pollution	1
5 - Production, distribution and rational utilization of energy	1

(b) Objectives with a nominal growth below the rise in the implicit price index

6 – Agricultural productivity and technology	– 4
4 – Protection and improvement of human health	– 5
1 – Exploration and exploitation of the earth	– 6
8 – Social structures and relationships	– 6
9 – Exploration and exploitation of space	– 10

There was a remarkable stability in the groups of objectives over the period 1986–87, with the different variations cancelling each other out.

Of the human and social objectives only land-use planning showed any pronounced movement, largely as a result of research projects undertaken in the field of civil engineering.

Among the technological objectives the only increase was in industrial R & D, with the emphasis on industrial competitiveness and, to a lesser extent, on the development of research in the construction of transport equipment.

The slight drop in the share of appropriations for general university funds is simply due to the slower rate of increase in this funding, with all disciplines being affected equally.

Table VIII-9

Government R & D financing classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2 – 3 – 4 – 8 Human and social objectives	12.6	12.5	12.6	12.5
1 – 5 – 7 – 9 Technological objectives	25.1	25.1	25.0	26.0
6 Agriculture	4.5	4.3	4.3	4.3
10 Research financed from general university funds	41.0	40.7	40.7	39.0
11 Non-oriented research	9.9	10.3	10.3	10.9
12 Unclassified research	3.9	4.4	4.4	4.2
13 Defence	2.8	2.8	2.8	3.0
Total	100.0	100.0	100.0	100.0

4.10. Portugal

4.10.1. In 1987 government R & D appropriations totalled ESC 18 million, 4.6 million up on 1986, which is equivalent to a 34 % increase in nominal terms. Allowing for the 12.9 % increase in the GDP implicit price index in the same period, the real increase in R & D spending amounted to 19 % – the highest in the Community. A comparison of the provisional budgets for 1987 and 1988 indicates that this strong growth is likely to slow down in 1988, while nevertheless remaining above the Community average.

4.10.2. It is extremely difficult to discern structural trends from a study of the variations by groups of objectives, mainly because of the size of the unclassified research item, as the following table illustrates:

Table VIII-10

Government R & D financing classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	15.8	14.6	15.4	12.9
1-5-7-9 Technological objectives	22.4	28.6	19.9	27.5
6 Agriculture	17.6	15.2	14.2	15.3
10 Research financed from general university funds	32.3	37.7	30.5	34.2
11 Non-oriented research	0.6	2.2	0.5	0.9
12 Unclassified research	11.3	1.8	19.5	9.2
13 Defence	-	-	-	-
Total	100.0	100.0	100.0	100.0

Nonetheless there was a below-average increase in 1987 in objectives 2 (Infrastructure and general planning of land-use), 6 (Agriculture) and 5 (Energy).

Of the technological objectives, industry still occupies pride of place.

4.11. United Kingdom

4.11.1. Total government funds allocated to R & D in 1987 amounted to UKL 4 809 million, 247 million up on 1986, making a nominal increase of 5.4 %. As the GDP implicit price index went up by 4.1 % in the same period, government research funding increased by 1.2 % in real terms. A comparison of provisional budgets for 1986 and 1987 shows that even this modest growth is unlikely to continue in 1988 and that R & D funding will actually fall slightly in real terms.

4.11.2. A calculation by objectives of the annual variations gives the following breakdown on either side of the GDP implicit price index:

Nominal rate of change (1987/86)
%

(a) **Objectives with a nominal growth equal to or greater than the rise in the implicit price index**

11 - Non-oriented research	59
8 - Social structures and relationships	21
4 - Protection and improvement of human health	17
9 - Exploration and exploitation of space	12
10 - Research financed from general university funds	7
All objectives	5
13 - Defence	4

(b) Objectives with a nominal growth below the rise in the implicit price index

3 - Control of environmental pollution	4
2 - Infrastructure and general planning of land use	4
1 - Exploration and exploitation of the earth	3
6 - Agricultural productivity and technology	-3
7 - Industrial productivity and technology	-7
5 - Production, distribution and rational utilization of energy	-7

Health (where general research is on the increase) and social structures and relationships (especially research related to education and training) account for the bulk of the relative growth in social and human objectives.

The relative fall in technological objectives affects all objectives except space, which relies to a large extent on multilateral cooperation. The fall is particularly marked in the fields of research (especially in the nuclear fusion sector) and industrial research (particularly means of transport, where a number of projects are nearing completion).

Lastly, there was an increase in the share of total R&D financing going to general university funds which was entirely due to the development of multidisciplinary research.

Multidisciplinary activities were also mainly responsible for the increase in total R&D funding for non-oriented research.

Table VIII-11
Government R&D financing classified by groups of objectives

Groups of NABS objectives	Final budgets		Provisional budgets	
	1986	1987	1987	1988
2-3-4-8 Human and social objectives	7.6	8.3	7.6	8.5
1-5-7-9 Technological objectives	18.2	16.6	17.9	18.6
6 Agriculture	4.6	4.2	4.3	4.4
10 Research financed from general university fund	15.3	15.6	15.3	15.7
11 Non-oriented research	3.0	4.6	3.3	4.8
12 Unclassified research	0.3	0.3	0.3	0.3
13 Defence	50.9	50.4	51.2	47.8
Total	100.0	100.0	100.0	100.0

5. R&D BUDGET APPROPRIATIONS GOING TO ENTERPRISES

It should be pointed out first of all that, as OECD statistical surveys on R&D spending show,¹ the amounts of R&D appropriations intended for enterprises, for financing purposes, may turn out to be far greater than the amounts they actually receive for research. The comparisons between countries will therefore place greater emphasis on trends than on absolute figures.

Although the figures do not cover all Member States of the Community, it is possible nonetheless to identify certain features as regards the relative scope and the structure of the funds going to enterprises.

¹ For more details of the type of appropriations going to enterprises, see 'Methods and definitions used for the annual report on government financing of R&D', doc. OS/3/87, rev., subsection 3.4.

Graph H and Table IX show that broadly speaking in 1987 the large countries allocated a far bigger share of total government R&D funding to enterprises than the others: United Kingdom (33%), Germany (28%) and France (around 25%) compared with less than 20% in the other countries. This larger relative share is chiefly due to the importance of defence in the contracts concluded between the State and private enterprises. Taking the appropriations for civil R&D alone, the share of total appropriations is significantly smaller: Germany (20%), United Kingdom (6%), with the other countries somewhere in between.

Leaving aside defence, the main NABS objective to benefit from grants to enterprises was of course industrial technology, its share increasing as defence becomes less important: Ireland, the Netherlands (100%), Italy (80%), Spain (73%), Germany (36%), United Kingdom (8%).

The breakdown of funds going to enterprises carrying out industrial research varies considerably from one country to another. In Ireland and the Netherlands where funding for enterprises goes entirely to industry, the money is spent almost exclusively on developing industrial efficiency and productivity. While Germany likewise attaches importance to these features it nonetheless diversifies its funding to cover construction, transport equipment, materials research, electronics and so on. In the United Kingdom there is a definite emphasis on construction and transport equipment.

As far as the other objectives are concerned, space research takes a large share in Italy and Spain.

Mention should be made of the importance two countries, Germany and Italy, attach to funds for energy R&D by enterprises. In Italy this reflects to some extent the predominance of national energy research activity, particularly in the field of renewable energy sources. In Germany this funding covers various energy sources other than nuclear fusion under cooperation agreements. This is not to imply, however, that the other countries are neglecting research by enterprises in this sector. A further explanation for the small proportion of funding for firms in the energy sector is that the figures do not include equity capital used for research purposes in public enterprises, which may play an important part in financing R&D in such enterprises.

Graph H

Share of total R & D appropriations that goes to enterprises

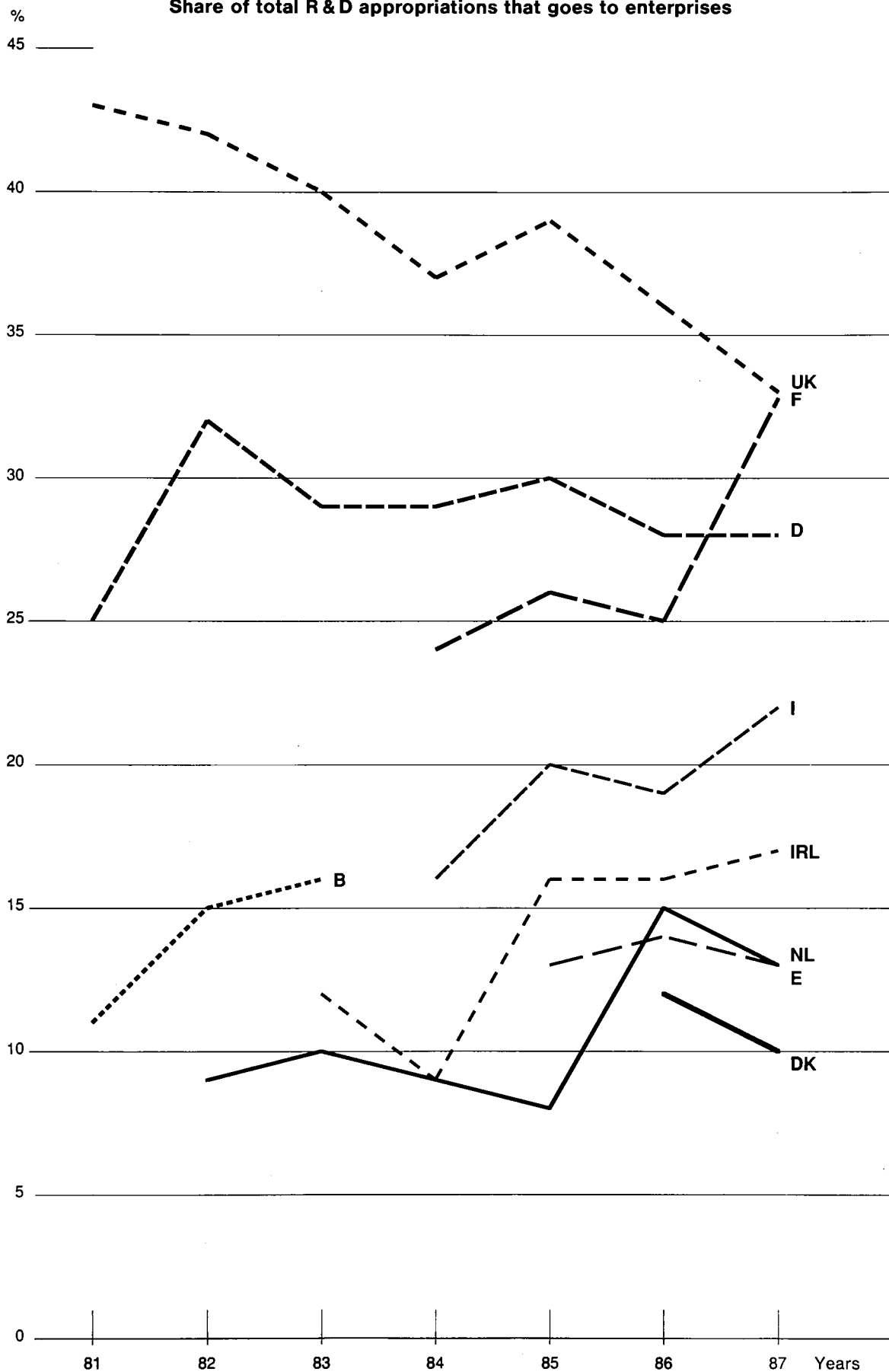


Table IX
Breakdown of R & D budget appropriations going to enterprises
1987

%

NABS objectives	B	DK	D	GR	E	F	IRL	I	NL	P	UK
1. Exploration and exploitation of the earth	:	:	0.7	:	3.2	0.3	-	-	-	:	0.0
2. Infrastructures and general planning of land use	:	:	3.1	:	-	0.5	-	0.1	-	:	0.1
3. Control of environmental pollution	:	:	2.9	:	-	0.9	-	-	-	:	0.0
4. Protection and improvement of human health	:	:	0.8	:	2.7	0.5	-	-	-	:	0.1
5. Production, distribution and rational utilization of energy	:	:	12.2	:	0.3	2.2	-	0.2	0.2	:	0.3
6. Agricultural productivity and technology	:	:	0.3	:	1.1	0.2	-	-	-	:	0.1
7. Industrial productivity and technology	:	:	36.4	:	72.8	26.3	100.0	80.8	99.8	:	8.0
8. Social structures and relationships	:	:	0.6	:	0.5	-	-	-	-	:	0.2
9. Exploration and exploitation of space	:	:	3.4	:	19.0	12.9	-	16.8	-	:	0.0
10. Research financed from general university funds	:	:	-	:	-	-	-	-	-	:	-
11. Non-oriented research	:	:	0.1	:	-	0.2	-	-	-	:	0.0
12. Unclassified research	:	:	0.2	:	0.3	-	-	-	-	:	0.2
13. Defence	:	:	39.3	:	-	56.0	-	-	-	:	91.0
Total R & D appropriations for enterprises	(%)	100.0	100.0	:	100.0	100.0	100.0	100.0	100.0	:	100.0
	(million ECU)	57 ¹	2981	:	132	3539	21	1077	228	:	2274
Share in total government R & D appropriations	(%)	9.8	28.0	:	14.5	33.8	17.4	21.7	12.8	:	33.3

¹ Estimate.

6. BI- AND MULTILATERAL COOPERATION

R & D funds for multilateral cooperation are included in the total amount of R & D only if they are entered in the central government budget as defined in the European system of integrated economic accounts (ESA). Informal collaboration and intramural support for multilateral projects are excluded from the analysis. Only appropriations for governmental agreements between Member States are included under cooperation activities.

The comparison of multilateral cooperation figures for different countries is distorted if defence is taken into account, for a number of reasons:

- (i) of the large countries, the United Kingdom and the Federal Republic of Germany devote a far higher proportion of their cooperation appropriations to defence than the other countries: the United Kingdom 51 % and Germany 23 % in 1987, compared with barely 1 % for the other countries excluding France;
- (ii) for some countries, such as France, it is very difficult to single out cooperation appropriations from the general defence research budget;
- (iii) the nature of defence cooperation depends greatly on the size of the country: small countries make greater use of multilateral cooperation whereas the larger ones prefer to enter into bilateral agreements.

For all these reasons it seems preferable to confine the comparative analysis to the cooperation appropriations for civil R & D as shown in Table X.

Table X
Multilateral cooperation appropriations for civil R & D
1987

%

NABS objectives	B	DK	D	GR	E	F	IRL	I	NL	P	UK
1. Exploration and exploitation of the earth	:	-	0.7	:	10.8	4.5	-	0.1	-	:	0.6
2. Infrastructures and general planning of land use	:	0.0	1.0	:	-	1.4	1.7	0.0	-	:	0.0
3. Control of environmental pollution	:	-	0.6	:	-	1.3	0.2	0.1	-	:	0.0
4. Protection and improvement of human health	:	-	0.2	:	-	3.3	-	2.8	0.4	:	2.4
5. Production, distribution and rational utilization of energy	:	0.5	9.9	:	23.6	2.5	1.1	-	10.3	:	2.6
6. Agricultural productivity and technology	:	8.5	1.6	:	0.8	10.1	13.7	2.5	-	:	2.5
7. Industrial productivity and technology	:	-	29.2	:	-	14.7	6.7	0.7	-	:	37.8
8. Social structures and relationships	:	0.1	0.6	:	-	0.8	9.3	0.9	-	:	0.1
9. Exploration and exploitation of space	:	39.2	38.3	:	51.2	37.7	27.7	66.1	53.5	:	29.4
10. Research financed from general university funds	:	0.0	-	:	-	-	39.0	-	-	:	-
11. Non-oriented research	:	51.6	18.0	:	-	23.8	0.6	26.8	35.4	:	24.5
12. Unclassified research	:	-	-	:	13.6	-	-	-	0.4	:	0.1
Total appropriations for cooperation in civil R & D	{	100.0	100.0	:	100.0	100.0	100.0	100.0	100.0	:	100.0
	{	33	1009	:	74	1090	12	235	83	:	381
Share of civil R & D cooperation appropriations in total civil government R & D appropriations (%)	:	5.7	10.9	:	8.9	15.9	9.8	5.1	4.8	:	11.3

Two general points emerge from this table:

- (a) the share of cooperation funding in total civil R & D appropriations is more than 10 % for the bigger countries and less than 10 % for the others;
- (b) all countries give priority to two objectives:
 - (i) space research (European Space Agency programmes), as is shown by the percentages of cooperation appropriations in total appropriations for space research:

Ireland (100 %), the Netherlands (90 %), Denmark (86 %), Germany (73 %), United Kingdom (61 %), Spain (47 %), Italy (35 %),
 - (ii) objectives 10 (general university funds) and 11 (non-oriented research).

Although Spain does not yet have any data on cooperation activities with regard to objectives 10 and 11, cooperation focuses mainly on the energy sector and the exploration and exploitation of space.

The Netherlands also attaches a good deal of importance to cooperation on energy, more especially in nuclear fusion research where 43 % of government funding is covered by multilateral contracts.

The Federal Republic of Germany also has cooperation contracts on nuclear fusions which account for 14 % of the total funding for this objective. However, industry – particularly aeronautics – is the main target for cooperation, which accounts for 70 % of the R & D funding going to this sector.

The United Kingdom likewise gives priority to cooperation in industrial research, principally in the aeronautics industry, with cooperation accounting for 98 % of the funding going to this field of research.

Ireland gives pride of place in its cooperation activities, just as it does domestically, to agricultural research. It is also the only country to place such a strong emphasis on cooperation on social structures and relationships and, under that objective, on education and training in particular.

7. COOPERATION IN THE COMMUNITY INSTITUTIONS

The Community institutions participate directly or indirectly in civil research projects. The relevant amounts, which are not normally included in national R & D expenditure, are shown separately in the tables.

The money contributed by these institutions to research programmes in 1987 amounted to ECU 817 million, an increase of 24 % over 1986.

Table VII indicates that cooperation within the Community institutions is mainly concentrated on two major objectives:

- (i) the energy sector where most of the funding goes to research on nuclear fission (radiation protection and prevention programmes) and to fusion (JET programme);
- (ii) industry, where more than half of the appropriations go to research on the design of information processing machines (Esprit programme).

A comparison of the figures for 1986 and 1987 shows a slight shift in funding away from energy research and towards industrial research. This reallocation of funding benefits microelectronics, data processing, office automation and computer-aided design (CAD).

8. PROVISIONAL EVALUATION OF GOVERNMENT R & D APPROPRIATIONS FOR BIOTECHNOLOGY, INFORMATION TECHNOLOGY AND THE DEVELOPING COUNTRIES

This chapter covers research which inherently cuts across a whole range of NABS objectives and is of vital importance for Europe. The three fields involved are biotechnology, information technology and developing countries.

Because of the degree of uncertainty in identifying defence appropriations for all these three research areas and the difficulty of collecting data from universities carrying out R & D in these fields, the amounts of government financing intended for biotechnology, information technology and developing countries set out in the series of Tables XI apply only to civil R & D and exclude general university funds (GUF).

8.1. Biotechnology

The definition of biotechnology R & D adopted by the Subcommittee is based on the OECD definition of biotechnology but confined to R & D activities. This definition, drafted with the help of the relevant departments in the Commission's Directorate-General XII, appears in the annex to the manual 'Methods and definitions used for the annual report on government financing of R & D'.

Examination of Table XI-1 shows that the larger countries and the European Community devote 1 to 2 % of their civil research appropriations to biotechnology R & D (excluding GUF) while the figure for Greece and Ireland is over 5 %. This is certainly due to the fact that appropriations for biotechnology R & D are more difficult to single out in the smaller countries. In the larger countries this research is done under clearly defined programmes for which specific appropriations are earmarked. In the other countries, this research tends to come under R & D on biology in general and

its funding cannot easily be singled out from the total appropriations for biological research. Also these countries generally have to estimate the funds allocated to biotechnology proper and a tendency to adopt a broader interpretation of the definition in the annex cannot be ruled out.

The country which devotes the highest proportion of its civil R & D appropriations to biotechnology is Ireland (6 %). Apart from the reasons mentioned earlier, this high proportion is also due to the marked increase in appropriations up to 1986. In 1987 appropriations for biotechnology R & D (excluding GUF) fell by 6.5 % on the previous year. However, after allowance is made for the allocations to general university funds, total government spending on biotechnology R & D actually increased by 5 % during the period 1986–87.

The decline in appropriations for biotechnology R & D (excluding GUF) in absolute terms is essentially caused by the drop in appropriations to industry, which fell 19 % in 1987 over 1986 following the marked rise in 1986 which particularly benefited industrial efficiency and competitiveness. The emphasis on industrial competitiveness in Ireland is reflected on a broader scale in the State aid granted to enterprises.

At the same time appropriations for biotechnology in the agricultural sector rose by 27 % in 1987 compared with 1986 and account for two-thirds of spending on biotechnology R & D. Here, too, the prominent position of agriculture is reflected on a more general level in the breakdown of total government financing of R & D.

In Greece, as in Ireland, appropriations for biotechnology R & D have shown a very strong upward trend in recent years, especially so in 1987 when they were up 75 % on 1986. There are two factors behind this strong growth: better financing of institutes specialized in this field of research and the priority given to biotechnology within the research programmes.

The marked growth in 1987 is due above all to the increased allocation of R & D funding to agricultural biotechnology which recorded a fourfold increase over 1986. The emphasis on biotechnology in agriculture, which takes up 30 % of the spending on biotechnology, is merely a reflection of the priority given to agricultural research in general.

Nevertheless, this very pronounced increase in agricultural biotechnology is offset across the board by the slower rate of growth in funding of biotechnology R & D in the health sector (up 50 % in 1987 over 1986), which continues to account for over half of biotechnology R & D appropriations, and more than anything else, by the marked reduction in R & D spending on industrial biotechnology (down 55 % in 1987 over 1986).

Of the other countries which devote a far smaller share of their civil R & D appropriations (excluding GUF) to biotechnology, Germany is the one which has recorded the highest increase (up 32 %) from 1986 to 1987. This growth is concentrated on industrial biotechnology (up 39 %) and non-oriented research (up 49 %). These two objectives together account for over half of the spending on biotechnology R & D. The health objective, which takes up two-thirds of the appropriations for biotechnology R & D, saw a marked increase in its funding in 1987 (up 20 % on 1986).

In the United Kingdom appropriations for biotechnology R & D were up by 10 % in 1987, with agricultural technology taking two-thirds of the funding for biotechnology. While appropriations for health research rose by 23 % over 1986, those for industrial technology fell by 6 %.

In Italy the funding of biotechnology R & D was the subject of an in-depth review in 1987, involving better identification of biotechnology within health research and an estimate of R & D appropriations going to agriculture and industry for biotechnology research in the agri-food sector.

Community spending on biotechnology R & D showed a pronounced increase in 1987 (up 49 %). The growth areas were health (+ 34 %), agriculture (+ 23 %) and above all industry. With a five-fold increase in appropriations spending on R & D in industrial biotechnology accounted for 20 % of all biotechnology R & D funding in 1987 as against 6 % in 1986.

Two research programmes are primarily responsible for this increase in biotechnology R & D funding: the final part of an existing programme on biomolecular engineering and, in particular, the launch of a new five-year biotechnology action programme. The allocation for 1987 is ECU 12.6 million and covers health, agriculture and industry (especially the agri-food sector).

8.2. Information technology

Figures for information technology R & D suffer greatly in the larger countries (Germany, France and the United Kingdom) from the lack of information on defence appropriations for research in this field. In these countries, or at least in France and the United Kingdom, appropriations for information technology R & D in the civil sector may only be a minor part of total appropriations for such research.

Considering civil R & D alone (excluding GUF), here again it is Ireland and Greece that devote a larger share (9% and 5% respectively) of their civil R & D appropriations to information technology than the other countries (under 5%).

The substantial share of civil appropriations going to information technology R & D in Ireland is due to the reasons mentioned earlier for biotechnology: a broad interpretation of the concept of information technology to include the study of its economic and social implications, and the high increase in public appropriations for such research in recent years, even though it slackened somewhat in 1987: - 13% (excluding GUF) and - 9% (including GUF).

Naturally the bulk of civil R & D appropriations for information technology goes to industry, once again with the primary purpose of increasing industrial efficiency and competitiveness. The large share allocated to the objective social structures and relationships, without parallel in the other countries, indicates the interest in the repercussions of the introduction of these technologies on the socio-economic environment. Most of the money is spent on improving the management of businesses and institutions.

In Greece the trend observed in biotechnology is reflected in the field of information technology with a substantial increase in funding (+ 51%) in 1987. The reasons for this increase are the same as in biotechnology - strong growth in appropriations for centres specialized in this area of research and priority given to this objective in the main research programmes.

Although three-quarters of civil R & D appropriations for information technology (excluding GUF) go to industry, 12% go to non-oriented research and 8% to social structures, chiefly for improving the management of businesses and institutions.

The other countries also give priority to industrial research in this field, with all except Italy allocating a proportion roughly equivalent to that of Ireland and Greece. The structural difference in the case of Italy is chiefly due to the very severe cuts in funding for information technology (excluding GUF) which fell by 95% in 1987 over 1986.

The emphasis in the United Kingdom's spending on civil R & D in information technology is on health, with the money going chiefly to general research and to hospital structure and organization of medical care.

European Community funds for information technology are spent entirely on industry. They account for one-quarter of Community funding and are mainly used in the Esprit programme.

8.3. Developing countries

There are two possible approaches to R & D for the benefit of developing countries: either the projects relate exclusively to the developing countries or they are of interest to the developing countries but also pursue a more general objective. The predominant approach varies from one country to another or there is a combination of the two.

France combines the two approaches. However, most of the research concerning the developing countries is done by two institutes: the Research office for overseas scientific and technical development (Orstom) and the Study and research group for the development of tropical agriculture. The other approach is essentially that of the National Scientific Research Council (CNRS), whose more general projects may include a section devoted to the developing countries.

In the other countries, R & D relevant to the developing countries is not as specific and it is more difficult to identify its share in the many different programmes or institutions engaged in such research.

These differences partly explain the wide deviations between countries (see Table XI-3).

Leaving aside Italy, whose spending on civil R & D (excluding GUF) for the developing countries is relatively small, it is difficult to discern any common pattern in these appropriations in the various countries.

Germany places the main priority on energy research, especially R & D related to new energy sources and energy saving, and on research in agriculture and industry.

The United Kingdom concentrates on agriculture, health and land-use planning (particularly civil engineering and water supply).

Health and agriculture research play the most prominent role in Community R & D appropriations.

In general there is a possibility of overlaps between R & D in biotechnology and/or information technology and R & D related to developing countries. This makes it extremely difficult to collect quantitative data on these research areas.

Table XI-1

**Breakdown of the share of civil R & D budget appropriations going to biotechnology
1987**

%

NABS objectives	EC	B	DK	D	GR	E	F 85	IRL	I	NL	P	UK
1. Exploration and exploitation of the earth	-	:	:	-	-	:	-	-	-	:	:	2.9
2. Infrastructures and general planning of land use	-	:	:	-	-	:	-	0.4	-	:	:	0.2
3. Control of environmental pollution	-	:	:	5.7	6.3	:	-	2.9	0.7	:	:	0.1
4. Protection and improvement of human health	21.7	:	:	30.2	52.7	:	45.1	2.2	24.3	:	:	11.7
5. Production, distribution and rational utilization of energy	-	:	:	-	1.0	:	1.6	-	0.7	:	:	-
6. Agricultural productivity and technology	57.5	:	:	11.0	30.1	:	24.2	31.1	16.9	:	:	62.3
7. Industrial productivity and technology	20.8	:	:	38.5	2.7	:	8.2	60.5	56.7	:	:	22.7
8. Social structures and relationships	-	:	:	0.4	-	:	-	-	-	:	:	-
9. Exploration and exploitation of space	-	:	:	-	-	:	-	-	-	:	:	-
11. Non-oriented research	-	:	:	14.2	7.1	:	12.3	2.8	-	:	:	-
12. Unclassified research	-	:	:	-	0.1	:	8.6	-	0.7	:	:	0.1
Total (excluding GUF)	{ (%) (million ECU)	100.0	:	100.0	100.0	:	100.0	100.0	100.0	100.0	:	100.0
		13.4	:	141.7	5.7	:	179.5	7.4 ¹	11.4	20.6 ²	:	51.5
Share in total government appropriations for civil R & D (%)		1.6	:	1.5	5.6	:	1.6	6.1	0.2	1.2	:	1.5

¹ For Ireland the amount for GUF is ECU 2.4 million.

² Excluding government subsidies to enterprises for programmes carried out within those enterprises (approximately ECU 4 to 6 million).

Table XI-2

**Breakdown of the share of civil R & D budget appropriations going to information technology
1987**

%

NABS objectives	EC	B	DK	D	GR	E	F 85	IRL	I	NL	P	UK
1. Exploration and exploitation of the earth	:	:	:	-	-	:	-	-	-	:	:	2.9
2. Infrastructures and general planning of land use	:	:	:	6.2	0.3	:	-	-	-	:	:	-
3. Control of environmental pollution	:	:	:	0.1	-	:	-	-	9.9	:	:	-
4. Protection and improvement of human health	:	:	:	-	1.0	:	0.4	-	10.8	:	:	15.7
5. Production, distribution and rational utilization of energy	:	:	:	-	-	:	9.2	-	2.9	:	:	-
6. Agricultural productivity and technology	:	:	:	0.1	-	:	-	-	19.5	:	:	-
7. Industrial productivity and technology	100.0	:	:	89.3	77.5	:	61.7	84.6	42.8	:	:	78.0
8. Social structures and relationships	:	:	:	0.2	8.4	:	14.9	15.4	5.8	:	:	0.0
9. Exploration and exploitation of space	:	:	:	2.5	-	:	-	-	-	:	:	-
11. Non-oriented research	:	:	:	1.6	0.7	:	13.8	-	4.1	:	:	3.4
12. Unclassified research	:	:	:	-	12.1	:	-	-	4.1	:	:	-
Total (excluding GUF)	{ (%) (million ECU)	100.0	:	100.0	100.0	:	100.0	100.0	100.0	100.0	:	100.0
		188.3	:	456.2	5.7	:	361.2	11.0 ¹	1.6	21.6	:	98.1
Share in total government appropriations for civil R & D (%)		23.0	:	4.9	5.2	:	5.3	9.1	0.0	1.2	:	2.9

¹ For Ireland the amount for GUF is ECU 1.1 million.

Table XI-3

**Breakdown of the share of civil R&D budget appropriations going to research for the developing countries
1987**

%

NABS objectives	EC	B	DK	D	GR	E	F 85	IRL	I	NL	P	UK	
1. Exploration and exploitation of the earth	2.7	:	:	0.9	-	:	10.9	-	81.8	:	:	4.5	
2. Infrastructures and general planning of land use	0.4	:	:	2.4	-	:	5.3	-	-	:	:	13.2	
3. Control of environmental pollution	4.1	:	:	1.9	-	:	2.8	-	-	:	:	0.7	
4. Protection and improvement of human health	57.8	:	:	0.5	-	:	19.6	-	17.5	:	:	16.8	
5. Production, distribution and rational utilization of energy	0.0	:	:	35.7	-	:	5.9	-	-	:	:	1.7	
6. Agricultural productivity and technology	31.7	:	:	26.3	-	:	27.7	-	0.7	:	:	48.7	
7. Industrial productivity and technology	2.9	:	:	19.1	-	:	8.3	-	-	:	:	9.5	
8. Social structures and relationships	0.4	:	:	5.9	-	:	8.3	-	-	:	:	4.9	
9. Exploration and exploitation of space	-	:	:	-	-	:	-	-	-	:	:	-	
11. Non-oriented research	-	:	:	7.3	-	:	1.4	-	-	:	:	-	
12. Unclassified research	-	:	:	-	-	:	9.8	-	-	:	:	-	
Total (excluding GUF)	(%)	100.0	:	:	100.0	-	:	100.0	-	100.0	100.0	:	100.0
	{ (million ECU)	13.3	:	:	22.1	-	:	263.4	-	1.0	43.1	:	46.1
Share in total government appropriations for civil R & D (%)	1.6	:	:	0.9	-	:	3.9	-	0.0	2.4	:	1.4	

Methodological notes

R & D objectives

The Nomenclature for the analysis and comparison of scientific programmes and budgets (NABS), 1983 version, is used for the breakdown of data.

Government financing

This is financing by central government as defined by the European System of National Accounts (ESA). This definition includes the 11 *Länder* in the Federal Republic of Germany.

It should be noted that there are breaks in the continuity of the figures for five countries.

There has been a slight discontinuity in the Italian series since 1973. Since then a small percentage of R & D relating mainly to human health and agriculture has gradually been transferred from the central government budget to the budgets of the regions which now are excluded from the survey. The effects of this transfer cannot be accurately estimated but are thought to be around 1–2%. They go some way to explaining the marked irregularity in the Italian figures for that period. Changes in the methods, timing of the surveys and definitions of R & D coefficients are responsible for a lack of continuity in the figures for the United Kingdom in the period 1974 to 1976, for the Federal Republic of Germany between 1976 and 1977 and for Ireland between 1977 and 1979, where a continuous process of improving definitions has been instituted. For Belgium, the adoption of new methods of breaking down the science policy budget is responsible for a break in the continuity of the series from 1978.

In addition, unlike previous years, the United Kingdom included in its budget for 1979–80 a provision to cover the increase in prices during the period between the passing of the budget and its implementation. This provision represents on average 8–9% of the total financing.

The Danish data do not refer to an actual R & D budget. They are estimated from coefficients dating back to 1986 and must therefore be interpreted with some caution.

There was a break in the continuity of the series of French data in 1986. Until then, figures as set out in French budget legislation were difficult to transpose into NABS nomenclature. France abandoned this type of legislation in 1986 and reverted to conventional budget headings which are easier to transpose into the NABS. This has made it possible to compare the final budgets for 1986 and 1987 and the provisional budgets for 1987 and 1988.

The regular collection of data on Greek R & D activities started in the late 1970s. The first survey of government research spending supplemented by estimates of the R & D workforce was made in 1977 and repeated in 1978. These figures included research spending by a few large public-sector undertakings (electricity, posts and telecommunications, oil, etc.). Since the collection of figures for actual expenditure delayed the provision of data and was not in line with the Community system, a number of innovations were made in 1983:

- (i) public undertakings were excluded from the scope of the survey;
- (ii) the recording of actual expenditure was abandoned;
- (iii) total figures for each research centre were recorded;
- (iv) research coefficients were applied to the figures recorded for higher education.

These changes are obviously the reason for the break in the series mentioned in the report.

Total R & D financing

For 1975 to 1987, the total appropriations for R & D in the final budgets of the Member States, including revisions to the budgets during the budgetary year, are used; for 1988, the figures in the provisional budgets are used.

Two separate questions arise concerning the use of data from provisional budgets:

- (a) the value of these data in predicting minor changes in structure that occur from one year to another. It seems inherently probable that the guidance will be valuable and broadly speaking this has been confirmed by the analysis of final budgets once they become available. This report has been written on the assumption that the provisional budgets for 1987 and 1988 provide reliable warning of changes in pattern and structure;

(b) the value of these data in providing a forecast of the volume of expenditure. Here the difficulties are greater but the important point is not so much the absolute size of the differences between provisional and final budgets as their relative size and the changes in the budgets from one year to the next. No clear-cut conclusions can be drawn from the evidence available but it suggests that the relationship differs from one country to another.

This is not surprising in itself as the institutional relationship between the two budgets varies in different countries. The total amount of the provisional budget appears to be information valuable enough to justify the use made of it in Table II but not to warrant its inclusion in the main tables on the same footing as final budgets.

Total budgets

The figures quoted are taken from the harmonized statistics prepared by DG II (Economic and Financial Affairs) of the Commission. The definitions correspond to those normally used in discussion of government financing of R & D but are not always identical with those most commonly used in the Member States.

Population

The figures used are the harmonized estimates of mean population over the year, prepared by Eurostat.

Data on European Communities expenditure

The figures are based on the Commission's budget documents. They include R & D financing by the European Coal and Steel Community but not funding of technological research by the European Development Fund, which is financed directly by the Member States. Up to 1978, Commission appropriations were expressed initially in budget units of account equal to one United States dollar or 50 Belgian francs at 1970 rates of exchange. They were then converted into EUA. As the budget has been expressed in EUA since 1978, previous budgets have also been converted into that unit. Following the adoption of the ecu in 1979, the Community institutions have used it for the presentation of data since 1981.

Comparison between EUR 12, the United States and Japan

The US and Japanese figures are taken from OECD international surveys of R & D resources.

Gross domestic product (GDP)

The figures for gross domestic product have been prepared in accordance with the European system of integrated economic accounts (ESA).

Figures in current values

Figures expressed in national currencies have been converted into a common unit for the calculation of aggregates.

For current comparisons, conversion is based on the ecu (European currency unit) using the average rates of exchange for each year, except for the comparison of the provisional budgets which is based on the exchange rates for March 1987 and 1988 (see Table 16.2 of the statistical annex).

Figures in constant terms

For comparisons between countries the figures in national currencies have been converted on the basis of purchasing power standards (PPS) using the purchasing power parities prepared by Eurostat.

For time comparisons the figures in national currencies have been deflated by the gross domestic product implicit price index.

Statistical data

Symbols and abbreviations

EUA/UCE	Statistical unit of account (based on central market rates)
GDP/PIB	Gross domestic product (GDP)
Mio/mio	Million
Mrd/mia	Thousand million
p	Provisional
.	Data not available
-	Nil
0 (0.0)	Less than half of the unit used

The symbols +, 0 and - in the tables which contain calculations of mean trends are used to indicate whether the values for the latest year are above, on, or below the mean trend line (regression)

IN NATIONAL CURRENCIES
AT CURRENT VALUES

EN MONNAIES NATIONALES
A PRIX COURANTS

Period Période	EUR 12	EC/CE	BL	DK	DE	GR	ES	FR	IR	IT	NL	PO	UK
	MIO ECU	MIO ECU	MIO FB	MIO DKR	MIO DM	MIO DRA	MRD PTA	MIO FF	MIO £	MRD LIT	MIO FL	MJO ESC	MIO £
TOTAL FINANCING OF R&D / CREDITS TOTAUX DE R&D													
1980	19851,4	284,3	19926,5	1697,6	17046,4	2792,0	33,7	31100,0	41,2	1549,7	3348,8	:	2477,1
1981	24482,7	351,7	20767,2	1982,3	17741,7	3365,0	47,8	40832,0	43,9	2603,1	3531,3	:	3315,8
1982	27147,3	389,2	23085,5	2219,4	19306,0	4152,0	54,8	47187,0	50,7	2996,7	3666,6	:	3689,8
1983	29182,4	462,6	25254,5	2542,5	19995,4	6067,0	60,0	55400,0	58,9	3782,3	3711,1	:	3999,8
1984	31629,0	442,1	26814,9	3038,9	19413,6	8908,0	73,6	62375,0	62,3	4653,5	3744,5	:	4307,8
1985	34495,2	572,5	29237,0	3409,2	21030,8	11609,0	104,7	67460,0	75,0	5313,7	3942,7	:	4582,1
1986	35363,2	660,7	28531,2	4036,4	21381,9	13646,7	110,2	68964,0	84,9	6444,2	4092,5	13470,4	4561,8
1987	37270,0	817,0	28765,2	4585,5	22027,4	16201,6	142,5	72540,0	93,8	7421,7	4177,3	18098,8	4808,7
1987 p)	36902,2	776,7	28897,0	4521,6	22351,8	17186,7	129,9	72540,0	86,9	7023,5	4177,3	18417,0	4715,3
1988	39497,9	998,3	29658,6	5314,4	22188,4	20293,7	158,6	77510,0	79,4	8853,9	4178,0	21729,9	4915,4
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE													
1980-1987	9,4	16,3	5,4	15,3	3,7	28,6	22,9	12,9	12,4	25,1	3,2	:	9,9
EXPECTED CHANGE (IN %) / ACCROISSEMENT EN %													
1988-1987	7,0	28,5	2,6	17,5	-0,7	18,1	22,1	6,9	-8,6	26,1	0,0	18,0	4,2
FINANCING OF CIVIL R&D / CREDITS POUR LA RECHERCHE CIVILE													
1980	14903,5	284,3	19850,6	1692,9	15316,2	2598,2	32,0	19750,0	41,2	1508,0	3251,0	:	1133,5
1981	17939,9	351,7	20687,7	1977,2	16169,4	3143,7	45,5	25132,0	43,9	2435,0	3432,3	:	1590,0
1982	20537,8	389,2	23004,9	2213,8	17659,2	4152,0	51,3	30487,0	50,7	2854,0	3562,7	:	1931,6
1983	22111,4	462,6	24968,7	2636,2	17260,9	6043,2	56,2	37300,0	58,9	3566,4	3598,4	:	2034,5
1984	23676,9	442,1	26429,0	3016,8	17476,8	8609,2	68,7	41535,0	62,3	4266,3	3624,5	:	2138,5
1985	25744,9	572,5	28793,8	3391,4	18521,8	11261,0	98,1	46360,0	75,0	4786,0	3822,3	:	2203,2
1986	26870,8	660,7	28073,7	4018,8	18791,4	13271,5	105,0	46264,0	84,9	5895,8	3978,7	13470,4	2237,7
1987	28370,6	817,0	28468,7	4547,5	19220,0	15887,4	130,4	47540,0	93,8	4849,7	4060,4	18098,8	2387,6
1987 p)	28043,1	776,7	28591,8	4503,4	19554,9	16783,9	118,4	47540,0	86,9	5473,5	4060,4	18417,0	2299,6
1988	29697,2	998,3	29465,4	5294,2	19416,4	19928,7	139,7	48360,0	79,4	7947,5	4052,3	21729,9	2566,0
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE													
1980-1987	9,6	16,3	5,3	15,2	3,3	29,5	22,2	13,4	12,4	24,3	3,2	:	11,2
EXPECTED CHANGE (IN %) / ACCROISSEMENT EN %													
1988-1987	5,9	28,5	3,1	17,6	-0,7	18,7	18,0	1,7	-8,6	22,8	-0,2	18,0	11,6

R&D FINANCING
IN MIO ECU AT CURRENT
VALUES AND EXCHANGE RATES

CREDITS POUR LA R&D
EN MIO ECU A PRIX ET A
TAUX DE CHANGES COURANTS

Period Période	EUR 12	EC/CE	BL	DK	DE	GR	ES	FR	IR	IT	NL	PO	UK
TOTAL FINANCING OF R&D / CREDITS TOTAUX DE R&D													
1980	19851,4	284,3	490,8	216,9	6753,1	47,1	338,3	5299,1	61,0	1303,1	1213,2	:	4138,8
1981	24482,7	351,7	502,9	250,2	7057,5	54,6	465,7	6760,4	63,6	2060,7	1272,5	:	5994,8
1982	27147,3	389,2	516,3	272,1	8125,4	63,5	509,2	7337,2	73,5	2263,7	1402,7	:	6583,6
1983	29182,4	462,6	555,8	325,0	8410,2	77,7	470,9	8182,2	82,4	2801,9	1462,7	:	6813,7
1984	31629,0	442,1	590,1	373,0	8674,1	100,8	581,7	9077,1	85,8	3368,8	1483,9	:	7293,7
1985	34495,2	572,5	651,0	425,1	9446,4	109,7	810,8	9927,9	104,8	3669,7	1570,2	:	7779,7
1986	35363,2	660,7	651,4	508,6	10047,0	99,3	801,7	10142,1	115,7	4408,2	1704,6	91,6	6793,0
1987	37270,0	817,0	668,3	581,6	10633,1	103,7	1002,5	10469,8	120,9	4965,3	1789,5	111,3	6823,9
1987 p)	36902,2	776,7	673,2	577,4	10786,5	112,8	891,5	10508,2	111,9	4754,5	1785,6	114,6	6586,1
1988	39497,9	998,3	683,1	668,1	10694,5	122,1	1145,5	11017,2	102,3	5753,0	1794,0	127,8	7390,4
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE													
1980-1987	9,4	16,3	4,5	15,1	6,7	11,9	16,8	10,2	10,3	21,1	5,7	:	7,4
EXPECTED CHANGE (IN %) / ACCROISSEMENT EN %													
1988-1987	7,0	28,5	1,5	15,7	-0,9	8,3	28,5	4,8	-8,5	21,0	0,5	11,6	12,2
FINANCING OF CIVIL R&D / CREDITS POUR LA RECHERCHE CIVILE													
1980	14903,5	284,3	489,0	216,3	6067,7	43,8	320,7	3365,2	61,0	1268,1	1177,8	:	1894,0
1981	17939,9	351,7	501,0	249,6	6432,0	51,0	442,8	4161,0	63,6	1927,7	1236,8	:	2874,6
1982	20537,8	389,2	514,5	271,4	7432,3	63,5	476,6	4740,5	73,5	2156,0	1363,0	:	3446,4
1983	22111,4	462,6	549,5	324,2	7602,2	77,4	440,9	5509,0	82,4	2641,9	1418,3	:	3465,8
1984	23676,9	442,1	581,6	370,3	7808,7	97,4	543,2	6044,4	85,8	3088,5	1436,4	:	3620,7
1985	25744,9	572,5	641,1	422,9	8319,5	106,5	759,3	6822,6	104,8	3305,3	1522,2	:	3740,7
1986	26870,8	660,7	641,0	506,4	8829,8	96,6	763,4	6803,8	115,7	4033,0	1657,2	91,6	3332,2
1987	28776,4	817,0	661,2	579,3	9277,9	103,7	916,8	6861,5	120,9	4614,1	1739,5	111,3	3788,2
1987 p)	28043,1	776,7	666,1	575,1	9436,8	110,1	812,1	6886,7	111,9	4382,2	1735,6	114,6	3211,9
1988	29697,2	998,3	678,6	665,5	9358,4	119,9	1008,7	6873,8	102,3	5164,0	1740,1	127,8	3858,0
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE													
1980-1987	9,6	16,3	4,4	15,1	6,3	12,8	16,2	10,7	10,3	20,3	5,7	:	8,7
EXPECTED CHANGE (IN %) / ACCROISSEMENT EN %													
1988-1987	5,9	28,5	1,9	15,7	-0,8	8,9	24,2	-0,2	-8,5	17,8	0,3	11,6	20,1

R&D FINANCING

CREDITS POUR LA R&D

IN MIO PPS AT 1980 PRICES
AND PURCHASING POWER PARITIESEN MIO SPA AUX PRIX ET
PARITES DE POUVOIR D'ACHAT 1980

Period Période	EUR 12	BL	DK	DE	GR	ES	FR	IR	IT	NL	PO	UK
TOTAL FINANCING OF R&D / CREDITS TOTAUX DE R&D												
1980	20907,9	470,0	201,8	6408,4	72,9	483,9	5298,1	76,8	1808,3	1240,3	:	4847,5
1981	23716,5	466,9	214,1	6413,3	73,3	612,5	6244,2	69,7	2563,2	1239,7	:	5819,5
1982	24380,5	484,4	216,8	6683,1	72,4	616,8	6462,0	69,8	2539,3	1213,6	:	6022,3
1983	25013,6	500,5	239,9	6403,9	88,8	605,8	6909,1	73,5	2779,3	1205,7	:	6207,2
1984	25958,5	505,9	260,9	6385,2	108,4	669,4	7243,4	72,2	3102,9	1194,5	:	6415,7
1985	26982,0	522,8	277,8	6769,1	119,9	876,6	7404,8	82,7	3254,8	1236,5	:	6437,1
1986	27013,9	492,3	313,7	6676,3	118,5	831,3	7234,3	88,7	3653,8	1274,8	139,5	6190,8
1987	27915,2	487,0	338,0	6732,5	121,7	1014,4	7377,8	94,5	3994,5	1323,5	166,1	6265,2
1987 ^{p)}	27589,6	489,3	333,3	6831,7	129,1	924,6	7377,8	87,6	3780,2	1323,5	169,0	6143,6
1988	28609,5	490,5	375,0	6678,5	132,1	1071,2	7668,1	77,6	4509,5	1315,8	183,6	6107,4
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE												
1980-1987	4,2	0,5	7,6	0,7	7,6	11,2	4,8	3,0	12,0	0,9	:	3,7
EXPECTED CHANGE (IN %) / ACCROISSEMENT EN %												
1988-1987	3,7	0,3	12,5	-2,2	2,3	15,9	3,9	-11,4	19,3	0,6	8,7	-0,6
FINANCING OF CIVIL R&D / CREDITS POUR LA RECHERCHE CIVILE												
1980	15577,3	468,2	201,3	5758,0	67,8	458,7	3364,6	76,8	1759,6	1204,1	:	2218,3
1981	17480,6	465,1	213,5	5844,9	68,5	582,4	3843,3	69,7	2397,7	1204,9	:	2790,6
1982	18456,8	482,7	216,3	6113,1	72,4	577,3	4175,0	69,8	2418,5	1179,2	:	3152,6
1983	18850,6	494,9	239,3	5788,6	88,4	567,1	4651,8	73,5	2620,6	1169,1	:	3157,3
1984	19316,9	498,7	259,0	5748,2	104,6	625,1	4823,3	72,2	2844,7	1156,2	:	3184,9
1985	20086,9	514,9	276,4	5961,6	116,4	820,9	5088,8	82,7	2931,5	1198,7	:	3095,1
1986	20271,4	484,4	312,3	5867,5	115,2	791,7	4853,1	88,7	3342,8	1239,4	139,5	3036,8
1987	20946,5	481,8	336,7	5874,4	119,3	927,8	4835,1	94,5	3713,5	1286,5	166,1	3110,8
1987 ^{p)}	20619,7	484,1	332,0	5976,8	126,1	842,3	4835,1	87,6	3484,2	1286,5	169,0	2996,1
1988	21336,0	487,3	373,6	5844,2	129,7	943,3	4784,3	77,6	4047,9	1276,2	183,6	3188,2
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE												
1980-1987	4,3	0,4	7,6	0,3	8,4	10,6	5,3	3,0	11,3	1,0	:	4,9
EXPECTED CHANGE (IN %) / ACCROISSEMENT EN %												
1988-1987	3,5	0,7	12,5	-2,2	2,9	12,0	-1,1	-11,4	16,2	-0,8	8,7	6,4

Period Période	EUR 12	BL	DK	DE	GR	ES	FR	IR	IT	NL	PO	UK
GOVERNMENT R&D FINANCING PER HEAD / CREDITS PUBLICS DE R&D PAR HABITANT												
ECU CURRENT PRICES AND EXCHANGE RATES / ECU PRIX ET TAUX DE CHANGE COURANTS												
1980	62.5	49.8	42.3	109.7	4.9	9.0	98.7	17.9	22.8	85.7	:	73.9
1981	76.8	51.0	48.9	114.4	5.6	12.3	125.3	18.5	36.1	89.3	:	107.0
1982	85.0	52.4	53.2	131.8	6.5	13.4	134.8	21.1	40.0	98.0	:	116.9
1983	91.1	56.4	63.5	136.9	7.9	12.3	149.7	23.5	49.3	101.8	:	120.9
1984	98.9	59.9	73.0	141.8	10.2	15.2	165.9	24.3	59.8	102.9	:	129.7
1985	107.2	66.0	83.1	154.8	11.0	21.0	179.9	29.6	64.2	108.4	:	137.3
1986	109.6	66.1	99.3	164.5	10.0	20.7	183.1	32.7	77.0	117.0	9.0	119.7
1987	115.2	67.7	113.4	173.8	10.4	25.8	188.2	34.1	86.6	122.6	10.9	119.9
ECU PRICES AND EXCHANGE RATES 1980 / ECU PRIX ET TAUX DE CHANGE 1980												
1980	62.5	49.8	42.3	109.7	4.9	9.0	98.7	17.9	22.8	85.7	:	73.9
1981	69.0	48.7	44.8	108.1	4.7	10.9	113.4	16.0	31.8	85.9	:	88.0
1982	70.5	50.2	45.2	112.9	4.6	10.9	115.2	15.9	31.6	84.1	:	89.9
1983	71.6	51.7	50.4	108.3	5.6	10.5	122.4	16.7	34.5	82.4	:	91.2
1984	73.6	51.6	55.1	107.4	6.7	11.4	128.1	16.0	38.6	81.5	:	93.6
1985	75.9	54.4	59.4	113.6	7.4	14.9	130.1	17.8	40.0	84.4	:	92.8
1986	75.5	51.9	66.5	112.7	7.4	14.4	127.7	19.1	45.5	84.7	6.5	87.3
1987	76.9	50.8	71.4	113.1	7.8	17.5	129.4	20.0	49.2	85.1	7.8	86.8
IN % OF TOTAL BUDGET / EN % DU BUDGET TOTAL												
1980	3.19	1.47	1.36	4.16	0.68	:	5.26	0.85	1.25	3.04	:	2.61
1981	3.34	1.31	1.36	4.06	0.52	:	5.62	0.74	1.60	2.53	:	3.18
1982	3.23	1.33	1.31	4.24	0.50	:	5.59	0.71	1.32	2.43	:	3.10
1983	3.04	1.40	1.19	4.12	0.55	1.50	5.96	0.70	1.30	2.40	:	3.16
1984	3.07	1.41	1.29	4.08	0.64	1.46	6.20	0.67	1.42	2.30	:	3.20
1985	3.13	1.47	1.40	4.29	0.68	1.75	6.29	0.75	1.45	2.37	:	3.12
1986	3.03	1.37	1.51	4.22	0.64	1.48	6.10	0.80	1.60	2.39	0.76	2.74
1987	3.06	1.41	1.63	4.20	0.61	1.77	6.03	0.88	1.72	2.39	0.96	2.76
IN % OF GROSS DOMESTIC PRODUCT / EN % DU PRODUIT INTERIEUR BRUT												
1980	0.91	0.58	0.45	1.15	0.16	0.22	1.12	0.44	0.46	0.99	:	1.08
1981	1.02	0.59	0.49	1.15	0.16	0.28	1.31	0.39	0.65	1.00	:	1.31
1982	1.04	0.60	0.48	1.21	0.16	0.28	1.32	0.38	0.64	0.99	:	1.34
1983	1.05	0.62	0.51	1.14	0.20	0.26	1.41	0.40	0.70	0.98	:	1.33
1984	1.06	0.61	0.54	1.11	0.24	0.28	1.46	0.38	0.76	0.95	:	1.35
1985	1.03	0.62	0.56	1.15	0.25	0.37	1.47	0.42	0.78	0.96	:	1.32
1986	1.01	0.57	0.60	1.10	0.25	0.34	1.37	0.47	0.72	0.95	0.32	1.22
1987	1.01	0.55	0.66	1.10	0.25	0.40	1.38	0.48	0.76	0.96	0.36	1.19
MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE												
TOTAL BUDGET / BUDGET TOTAL												
1980-1987	10.1	6.0	12.3	3.6	30.7	:	10.7	12.1	19.5	6.8	:	9.1
GROSS DOMESTIC PRODUCT / PRODUIT INTERIEUR BRUT												
1980-1987	7.7	6.1	9.2	4.5	20.7	12.9	9.6	11.2	16.3	3.7	21.8	8.4

R&D FINANCING
BY CHAPTERS OF NABS
IN NATIONAL CURRENCIES
AND AT CURRENT PRICES

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MIO PTA
1986								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	5172	684390	1118023	65350	437386	956218	6039
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	8016	580714	222205	90547	401096	39342	3514
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	39740	623687	662183	40548	690057	361850	403
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	27202	1229419	885505	243370	655153	1023568	3714
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	371287	2709615	2907120	199717	2213820	821198	11726
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	12735	1401533	2102081	312118	433128	3369272	5835
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	175677	5143299	4039436	649566	3114243	1280083	19225
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	5097	530639	209172	179524	489688	890650	957
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	6904	1764840	2202253	110841	964491	47100	2347
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	7955028	6506521	1353072	6749826	3611494	24385
11. NON-ORIENTED RESEARCH	1100	8898	3943396	6609312	774086	2611969	824768	24605
12. OTHER CIVIL RESEARCH	1200	-	304257	609888	-	30589	45969	2211
13. DEFENCE	1300	-	8492351	457528	17632	2590416	375221	5244
TOTAL EXPENDITURE	9900	660728	35363152	28531216	4036398	21381856	13646733	110203
1987								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	6609	727948	1094064	69343	420067	1201790	12221
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	26647	580896	207701	90659	421841	39834	3891
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	44875	697657	656316	57710	744385	322105	2641
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	27326	1480971	839419	221542	721612	1222604	13434
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	381992	2344923	2779975	209311	1935585	881106	6071
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	18068	1409381	2126772	401523	448958	3538829	9180
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	272458	5534393	3700018	778741	3434001	1801556	28070
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	8680	607198	137242	198859	546168	1091559	1318
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	10680	2071771	2860493	117525	1101630	49135	8149
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	8377241	6433450	1451948	6596234	4603970	28043
11. NON-ORIENTED RESEARCH	1100	19485	4216763	6940287	970290	2820441	1064906	12487
12. OTHER CIVIL RESEARCH	1200	182	325321	682984	-	29053	70217	4863
13. DEFENCE	1300	-	8895543	306488	18021	2807431	314000	12173
TOTAL EXPENDITURE	9900	817002	37269952	28765200	4585472	22027392	16201611	142540

FR	IR	IT	NL	PO	UK		
1000 FF	1000 £	MIO LIT	1000 FL	1000Esc	1000 £	Code	Objectifs Nabs
1986							
1324000	548	85572	24489	1464200	80632	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
780000	3295	62930	173420	1567700	70360	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
727000	806	60721	126670	392800	46111	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
2059000	3840	324241	111034	31200	174550	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
3183000	1023	980916	167452	615200	182750	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
2987000	20184	252880	186036	2367300	208423	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
9624000	24502	1374230	707563	924100	447871	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
404000	8283	79084	107644	154000	59778	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
4848000	1605	420878	128263	-	116510	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
8630000	18980	1747730	1679700	4350500	699000	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
10959000	1829	426573	406135	75000	139004	1100	11. RECHERCHES NON ORIENTEES
739000	-	80025	160255	1528400	12746	1200	12. RECHERCHES NON VENTILEES
22700000	-	548387	113800	-	2324030	1300	13. DEFENSE
68964000	84895	6444167	4092500	13470400	4561765	9900	TOTAL DES CREDITS
1987							
1311000	167	105334	23125	1639000	82746	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
762000	2505	42571	190149	1103600	72850	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
622000	1583	114602	127582	636500	47963	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
2423000	4328	430354	105190	570100	205022	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
3127000	876	749266	168414	568300	170339	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
3188000	19135	207736	177682	2759000	203110	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
9750000	27175	1665019	737242	2974600	417662	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
395000	8633	124217	100992	324000	72143	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
5022000	2544	655088	116061	-	130291	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
8755000	24817	2246000	1700000	6815700	750000	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
11532000	2004	461059	430161	389500	221387	1100	11. RECHERCHES NON ORIENTEES
653000	-	98411	183834	318500	14077	1200	12. RECHERCHES NON VENTILEES
25000000	-	522000	116858	-	2421084	1300	13. DEFENSE
72540000	93767	7421657	4177286	18098800	4808674	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN NATIONAL CURRENCIES
AND AT CURRENT PRICES

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MIO PTA
1988								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	5474	809135	1113553	78372	485204	1424296	10322
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	32296	609540	216322	104988	404034	57851	5715
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	47596	739658	672383	96893	757393	584308	2657
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	42907	1601534	761879	245411	795670	1748425	12222
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	347784	2269952	2679227	210073	1733293	594468	4028
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	28240	1458711	1936565	452214	461472	5022836	9707
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	436295	5612184	4072052	926509	3228308	2777544	28516
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	8164	629475	144623	293964	550023	1587463	1321
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	23294	2310909	3068998	125015	1206686	67750	10334
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	8909449	6407775	1543413	6826832	5060000	30333
11. NON-ORIENTED RESEARCH	1100	26023	4440649	7505788	1217320	2944548	917549	18925
12. OTHER CIVIL RESEARCH	1200	248	306943	886244	-	22944	86235	5573
13. DEFENCE	1300	-	9800689	193193	20236	2772007	365000	18935
TOTAL EXPENDITURE	9900	998320	39497920	29658592	5314408	22188400	20293712	158588

FR	IR	IT	NL	PO	UK		
1000 FF	1000 £	MIO LIT	1000 FL	1000 ESC	1000 £	Code	Objectifs Nabs
1988							
1352000	151	132026	25220	2275700	102611	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
761000	1568	66741	187464	1005800	76503	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
576000	1555	153604	130901	672700	53463	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
2482000	4213	514305	105813	713500	218691	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
3075000	644	798835	145881	454900	193857	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
3209000	13086	220917	178993	3316300	213896	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
9598000	22645	1786083	776212	3242400	476806	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
382000	8106	135331	101718	416100	70626	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
5430000	2542	805182	137622	-	139999	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
9094000	23345	2776000	1630000	7442000	770000	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
11732000	1515	514896	455715	196700	234369	1100	11. RECHERCHES NON ORIENTEES
675000	-	43592	176793	1993800	15156	1200	12. RECHERCHES NON VENTILEES
29150000	-	906400	125624	-	2349445	1300	13. DEFENSE
77510000	79370	8853912	4177956	21729888	4915422	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN 1000 ECU

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
1986								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	5172	684390	25527	8235	205520	6958	43930
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	8016	580714	5073	11410	188468	286	25563
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	39740	623687	15119	5110	324246	2633	2935
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	27202	1229419	20218	30668	307845	7448	27021
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	371287	2709615	66376	25167	1040237	5976	85304
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	12735	1401533	47995	39331	203520	24517	42446
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	175677	5143299	92229	81854	1463330	9315	139861
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	5097	530639	4776	22622	230096	6481	6963
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	6904	1764840	50282	13967	453198	343	17075
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	7955028	148558	170506	3171628	26280	177402
11. NON-ORIENTED RESEARCH	1100	8898	3943396	150905	97545	1227319	6002	179001
12. OTHER CIVIL RESEARCH	1200	-	304257	13925	-	14373	335	16084
13. DEFENCE	1300	-	8492351	10446	2222	1217192	2730	38149
TOTAL EXPENDITURE	9900	660728	35363152	651430	508641	10046971	99303	801734
1987								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	6609	727948	25420	8795	202775	7693	85947
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	26647	580896	4826	11499	203632	255	27365
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	44875	697657	15249	7320	359330	2062	18574
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	27326	1480971	19504	28100	348337	7826	94478
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	381992	2344923	64592	26548	934348	5640	42696
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	18068	1409381	49415	50928	216722	22653	64561
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	272458	5534393	85969	98773	1657664	11532	197410
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	8680	607198	3189	25223	263647	6987	9269
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	10680	2071771	66463	14907	531780	315	57310
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	8377241	149479	184161	3184141	29471	197220
11. NON-ORIENTED RESEARCH	1100	19485	4216763	161255	123069	1361486	6817	87818
12. OTHER CIVIL RESEARCH	1200	182	325321	15869	-	14024	449	34200
13. DEFENCE	1300	-	8895543	7121	2286	1355206	2010	85610
TOTAL EXPENDITURE	9900	817002	37269952	668349	581608	10633087	103710	1002451

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
							1986
194713	747	58536	10200	9955	120070	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
114710	4492	43047	72232	10658	104774	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
106916	1099	41536	52760	2671	68664	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
302805	5235	221798	46247	212	259924	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
468105	1395	670999	69746	4183	272135	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
439280	27516	172983	77486	16094	310365	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
1415344	33403	940047	294709	6283	666929	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
59414	11292	54098	44835	1047	89016	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
712966	2188	287903	53423	-	173496	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
1269162	25875	1195540	699616	29577	1040888	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
1611674	2493	291799	169160	510	206992	1100	11. RECHERCHES NON ORIENTEES
108680	-	54741	66748	10391	18980	1200	12. RECHERCHES NON VENTILEES
3338353	-	375126	47399	-	3460736	1300	13. DEFENSE
10142122	115736	4408152	1704576	91580	6792970	9900	TOTAL DES CREDITS
							1987
189219	215	70471	9907	10081	117424	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
109981	3230	28481	81459	6788	103380	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
89774	2041	76672	54656	3915	68064	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
349716	5581	287918	45063	3507	290944	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
451326	1130	501279	72148	3495	241726	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
460130	24676	138981	76119	16970	288231	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
1407235	35044	1113942	315833	18296	592698	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
57011	11133	83105	43265	1993	102377	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
724834	3281	438271	49720	-	184894	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
1263625	32004	1502634	728276	41922	1064314	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
1664434	2584	308461	184280	2396	314167	1100	11. RECHERCHES NON ORIENTEES
94249	-	65840	78754	1959	19976	1200	12. RECHERCHES NON VENTILEES
3608295	-	349232	50062	-	3435726	1300	13. DEFENSE
10469830	120921	4965289	1789540	111322	6823921	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN 1000 ECU

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
1988								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	5474	809135	25646	9852	233861	8570	74558
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	32296	609540	4982	13198	194739	348	41281
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	47596	739658	15486	12180	365053	3516	19192
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	42907	1601534	17547	30851	383502	10520	88282
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	347784	2269952	61706	26408	835423	3577	29095
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	28240	1458711	44601	56848	222423	30223	70116
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	436295	5612184	93784	116472	1555998	16713	205978
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	8164	629475	3331	36954	265103	9552	9542
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	23294	2310909	70682	15716	581606	408	74645
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	8909449	147578	194024	3290436	30447	219103
11. NON-ORIENTED RESEARCH	1100	26023	4440649	172867	153030	1419230	5521	136700
12. OTHER CIVIL RESEARCH	1200	248	306943	20411	-	11059	519	40255
13. DEFENCE	1300	-	9800689	4449	2544	1336067	2196	136772
TOTAL EXPENDITURE	9900	998320	39497920	683071	668078	10694493	122109	1145519

EN 1000 ECU

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
							1988
192172	195	85786	10829	13388	154277	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
108168	2021	43366	80496	5917	115023	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
81872	2005	99807	56208	3957	80382	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
352789	5431	334179	45436	4197	328805	0400	4. PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
437077	830	519058	62641	2676	291467	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
456124	16870	143545	76859	19509	321595	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
1364249	29193	1160540	333303	19075	716884	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
54297	10450	87934	43677	2448	106187	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
771814	3277	523182	59094	-	210490	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
1292611	30096	1803757	699916	43780	1157705	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
1667574	1953	334563	195682	1157	352377	1100	11. RECHERCHES NON ORIENTEES
95944	-	28325	75914	11729	22787	1200	12. RECHERCHES NON VENTILEES
4143350	-	588950	53943	-	3532421	1300	13. DEFENSE
11017189	102322	5752992	1793999	127833	7390400	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN % OF TOTAL FINANCING

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
1986								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	0,8	1,9	3,9	1,6	2,0	7,0	5,5
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	1,2	1,6	0,8	2,2	1,9	0,3	3,2
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	6,0	1,8	2,3	1,0	3,2	2,7	0,4
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	4,1	3,5	3,1	6,0	3,1	7,5	3,4
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	56,2	7,7	10,2	4,9	10,4	6,0	10,6
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	1,9	4,0	7,4	7,7	2,0	24,7	5,3
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	26,6	14,5	14,2	16,1	14,6	9,4	17,4
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	0,8	1,5	0,7	4,4	2,3	6,5	0,9
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	1,0	5,0	7,7	2,7	4,5	0,3	2,1
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	22,5	22,8	33,5	31,6	26,5	22,1
11. NON-ORIENTED RESEARCH	1100	1,3	11,2	23,2	19,2	12,2	6,0	22,3
12. OTHER CIVIL RESEARCH	1200	-	0,9	2,1	-	0,1	0,3	2,0
13. DEFENCE	1300	-	24,0	1,6	0,4	12,1	2,7	4,8
TOTAL EXPENDITURE	9900	100,0	100,0	100,0	100,0	100,0	100,0	100,0
1987								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	0,8	2,0	3,8	1,5	1,9	7,4	8,6
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	3,3	1,6	0,7	2,0	1,9	0,2	2,7
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	5,5	1,9	2,3	1,3	3,4	2,0	1,9
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	3,3	4,0	2,9	4,8	3,3	7,5	9,4
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	46,8	6,3	9,7	4,6	8,8	5,4	4,3
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	2,2	3,8	7,4	8,8	2,0	21,8	6,4
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	33,3	14,8	12,9	17,0	15,6	11,1	19,7
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	1,1	1,6	0,5	4,3	2,5	6,7	0,9
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	1,3	5,6	9,9	2,6	5,0	0,3	5,7
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	22,5	22,4	31,7	29,9	28,4	19,7
11. NON-ORIENTED RESEARCH	1100	2,4	11,3	24,1	21,2	12,8	6,6	8,8
12. OTHER CIVIL RESEARCH	1200	0,0	0,9	2,4	-	0,1	0,4	3,4
13. DEFENCE	1300	-	23,9	1,1	0,4	12,7	1,9	8,5
TOTAL EXPENDITURE	9900	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
							1986
1,9	0,6	1,3	0,6	10,9	1,8	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,1	3,9	1,0	4,2	11,6	1,5	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,1	0,9	0,9	3,1	2,9	1,0	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
3,0	4,5	5,0	2,7	0,2	3,8	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
4,6	1,2	15,2	4,1	4,6	4,0	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
4,3	23,8	3,9	4,5	17,6	4,6	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
14,0	28,9	21,3	17,3	6,9	9,8	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,6	9,8	1,2	2,6	1,1	1,3	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
7,0	1,9	6,5	3,1	-	2,6	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
12,5	22,4	27,1	41,0	32,3	15,3	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
15,9	2,2	6,6	9,9	0,6	3,0	1100	11. RECHERCHES NON ORIENTEES
1,1	-	1,2	3,9	11,3	0,3	1200	12. RECHERCHES NON VENTILEES
32,9	-	8,5	2,8	-	50,9	1300	13. DEFENSE
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS
							1987
1,8	0,2	1,4	0,6	9,1	1,7	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,1	2,7	0,6	4,6	6,1	1,5	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
0,9	1,7	1,5	3,1	3,5	1,0	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
3,3	4,6	5,8	2,5	3,1	4,3	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
4,3	0,9	10,1	4,0	3,1	3,5	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
4,4	20,4	2,8	4,3	15,2	4,2	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
13,4	29,0	22,4	17,6	16,4	8,7	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,5	9,2	1,7	2,4	1,8	1,5	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
6,9	2,7	8,8	2,8	-	2,7	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
12,1	26,5	30,3	40,7	37,7	15,6	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
15,9	2,1	6,2	10,3	2,2	4,6	1100	11. RECHERCHES NON ORIENTEES
0,9	-	1,3	4,4	1,8	0,3	1200	12. RECHERCHES NON VENTILEES
34,5	-	7,0	2,8	-	50,3	1300	13. DEFENSE
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN % OF TOTAL FINANCING

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
1988								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	0,5	2,0	3,8	1,5	2,2	7,0	6,5
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	3,2	1,5	0,7	2,0	1,8	0,3	3,6
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	4,8	1,9	2,3	1,8	3,4	2,9	1,7
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	4,3	4,1	2,6	4,6	3,6	8,6	7,7
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	34,8	5,7	9,0	4,0	7,8	2,9	2,5
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	2,8	3,7	6,5	8,5	2,1	24,8	6,1
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	43,7	14,2	13,7	17,4	14,5	13,7	18,0
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	0,8	1,6	0,5	5,5	2,5	7,8	0,8
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	2,3	5,9	10,3	2,4	5,4	0,3	6,5
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	22,6	21,6	29,0	30,8	24,9	19,1
11. NON-ORIENTED RESEARCH	1100	2,6	11,2	25,3	22,9	13,3	4,5	11,9
12. OTHER CIVIL RESEARCH	1200	0,0	0,8	3,0	-	0,1	0,4	3,5
13. DEFENCE	1300	-	24,8	0,7	0,4	12,5	1,8	11,9
TOTAL EXPENDITURE	9900	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
							1988
1,7	0,2	1,5	0,6	10,5	2,1	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,0	2,0	0,8	4,5	4,6	1,6	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
0,7	2,0	1,7	3,1	3,1	1,1	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
3,2	5,3	5,8	2,5	3,3	4,4	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
4,0	0,8	9,0	3,5	2,1	3,9	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
4,1	16,5	2,5	4,3	15,3	4,4	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
12,4	28,5	20,2	18,6	14,9	9,7	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,5	10,2	1,5	2,4	1,9	1,4	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
7,0	3,2	9,1	3,3	-	2,8	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
11,7	29,4	31,4	39,0	34,2	15,7	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
15,1	1,9	5,8	10,9	0,9	4,8	1100	11. RECHERCHES NON ORIENTEES
0,9	-	0,5	4,2	9,2	0,3	1200	12. RECHERCHES NON VENTILEES
37,6	-	10,2	3,0	-	47,8	1300	13. DEFENSE
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN % OF FINANCING OF CIVIL R&D

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
1986								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	0,8	2,5	4,0	1,6	2,3	7,2	5,8
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	1,2	2,2	0,8	2,3	2,1	0,3	3,3
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	6,0	2,3	2,4	1,0	3,7	2,7	0,4
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	4,1	4,6	3,2	6,1	3,5	7,7	3,5
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	56,2	10,1	10,4	5,0	11,8	6,2	11,2
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	1,9	5,2	7,5	7,8	2,3	25,4	5,6
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	26,6	19,1	14,4	16,2	16,6	9,6	18,3
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	0,8	2,0	0,7	4,5	2,6	6,7	0,9
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	1,0	6,6	7,8	2,8	5,1	0,4	2,2
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	29,6	23,2	33,7	35,9	27,2	23,2
11. NON-ORIENTED RESEARCH	1100	1,3	14,7	23,5	19,3	13,9	6,2	23,4
12. OTHER CIVIL RESEARCH	1200	-	1,1	2,2	-	0,2	0,3	2,1
TOTAL EXPENDITURE	9900	100,0	100,0	100,0	100,0	100,0	100,0	100,0
1987								
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	0,8	2,6	3,8	1,5	2,2	7,6	9,4
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	3,3	2,0	0,7	2,0	2,2	0,3	3,0
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	5,5	2,5	2,3	1,3	3,9	2,0	2,0
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	3,3	5,2	2,9	4,9	3,8	7,7	10,3
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	46,8	8,3	9,8	4,6	10,1	5,5	4,7
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	2,2	5,0	7,5	8,8	2,3	22,3	7,0
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	33,3	19,5	13,0	17,0	17,9	11,3	21,5
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	1,1	2,1	0,5	4,4	2,8	6,9	1,0
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	1,3	7,3	10,1	2,6	5,7	0,3	6,3
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	29,5	22,6	31,8	34,3	29,0	21,5
11. NON-ORIENTED RESEARCH	1100	2,4	14,9	24,4	21,2	14,7	6,7	9,6
12. OTHER CIVIL RESEARCH	1200	0,0	1,1	2,4	-	0,2	0,4	3,7
TOTAL EXPENDITURE	9900	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
1986							
2,9	0,6	1,5	0,6	10,9	3,6	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,7	3,9	1,1	4,4	11,6	3,1	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,6	0,9	1,0	3,2	2,9	2,1	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
4,5	4,5	5,5	2,8	0,2	7,8	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
6,9	1,2	16,6	4,2	4,6	8,2	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
6,5	23,8	4,3	4,7	17,6	9,3	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
20,8	28,9	23,3	17,8	6,9	20,0	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,9	9,8	1,3	2,7	1,1	2,7	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
10,5	1,9	7,1	3,2	-	5,2	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
18,7	22,4	29,6	42,2	32,3	31,2	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
23,7	2,2	7,2	10,2	0,6	6,2	1100	11. RECHERCHES NON ORIENTEES
1,6	-	1,4	4,0	11,3	0,6	1200	12. RECHERCHES NON VENTILEES
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS
1987							
2,8	0,2	1,5	0,6	9,1	3,5	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,6	2,7	0,6	4,7	6,1	3,1	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,3	1,7	1,7	3,1	3,5	2,0	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
5,1	4,6	6,2	2,6	3,1	8,6	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
6,6	0,9	10,9	4,1	3,1	7,1	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
6,7	20,4	3,0	4,4	15,2	8,5	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
20,5	29,0	24,1	18,2	16,4	17,5	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,8	9,2	1,8	2,5	1,8	3,0	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
10,6	2,7	9,5	2,9	-	5,5	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
18,4	26,5	32,6	41,9	37,7	31,4	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
24,3	2,1	6,7	10,6	2,2	9,3	1100	11. RECHERCHES NON ORIENTEES
1,4	-	1,4	4,5	1,8	0,6	1200	12. RECHERCHES NON VENTILEES
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
							1988
2,8	0,2	1,7	0,6	10,5	4,0	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,6	2,0	0,8	4,6	4,6	3,0	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,2	2,0	1,9	3,2	3,1	2,1	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
5,1	5,3	6,5	2,6	3,3	8,5	0400	4. PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
6,4	0,8	10,1	3,6	2,1	7,6	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
6,6	16,5	2,8	4,4	15,3	8,3	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
19,8	28,5	22,5	19,2	14,9	18,6	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,8	10,2	1,7	2,5	1,9	2,8	0800	8. VIE EN SOCIÉTÉ (STRUCTURES ET RELATIONS)
11,2	3,2	10,1	3,4	-	5,5	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
18,8	29,4	34,9	40,2	34,2	30,0	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
24,3	1,9	6,5	11,2	0,9	9,1	1100	11. RECHERCHES NON ORIENTEES
1,4	-	0,5	4,4	9,2	0,6	1200	12. RECHERCHES NON VENTILEES
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
IN ECU PER HEAD
AT CURRENT VALUES AND EXCHANGE RATES

Nabs Objectives	Code	EUR 12	BL	DK	DE	GR	ES
1986							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	2,1	2,6	1,6	3,4	0,7	1,1
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	1,8	0,5	2,2	3,1	0,0	0,7
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	1,9	1,5	1,0	5,3	0,3	0,1
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	3,8	2,1	6,0	5,0	0,7	0,7
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	8,4	6,7	4,9	17,0	0,6	2,2
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	4,3	4,9	7,7	3,3	2,5	1,1
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	15,9	9,4	16,0	24,0	0,9	3,6
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	1,6	0,5	4,4	3,8	0,7	0,2
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	5,5	5,1	2,7	7,4	0,0	0,4
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	24,6	15,1	33,3	51,9	2,6	4,6
11. NON-ORIENTED RESEARCH	1100	12,2	15,3	19,0	20,1	0,6	4,6
12. OTHER CIVIL RESEARCH	1200	0,9	1,4	-	0,2	0,0	0,4
13. DEFENCE	1300	26,3	1,1	0,4	19,9	0,3	1,0
TOTAL EXPENDITURE	9900	109,6	66,1	99,3	164,5	10,0	20,7
1987							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	2,2	2,6	1,7	3,3	0,8	2,2
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	1,8	0,5	2,2	3,3	0,0	0,7
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	2,2	1,5	1,4	5,9	0,2	0,5
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	4,6	2,0	5,5	5,7	0,8	2,4
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	7,2	6,5	5,2	15,3	0,6	1,1
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	4,4	5,0	9,9	3,5	2,3	1,7
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	17,1	8,7	19,3	27,1	1,2	5,1
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	1,9	0,3	4,9	4,3	0,7	0,2
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	6,4	6,7	2,9	8,7	0,0	1,5
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	25,9	15,1	35,9	52,1	3,0	5,1
11. NON-ORIENTED RESEARCH	1100	13,0	16,3	24,0	22,3	0,7	2,3
12. OTHER CIVIL RESEARCH	1200	1,0	1,6	-	0,2	0,0	0,9
13. DEFENCE	1300	27,5	0,7	0,4	22,2	0,2	2,2
TOTAL EXPENDITURE	9900	115,2	67,7	113,4	173,8	10,4	25,8

FINANCEMENT DU R&D
PAR CHAPITRE DE NABS
EN ECU PAR HABITANT
A PRIX ET TAUX DE CHANGE CDURANTS

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FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
1986							
3,5	0,2	1,0	0,7	1,0	2,1	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
2,1	1,3	0,8	5,0	1,0	1,8	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,9	0,3	0,7	3,6	0,3	1,2	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
5,5	1,5	3,9	3,2	0,0	4,6	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
8,5	0,4	11,7	4,8	0,4	4,8	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
7,9	7,8	3,0	5,3	1,6	5,5	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
25,6	9,4	16,4	20,2	0,6	11,7	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
1,1	3,2	0,9	3,1	0,1	1,6	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
12,9	0,6	5,0	3,7	-	3,1	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
22,9	7,3	20,9	48,0	2,9	18,3	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
29,1	0,7	5,1	11,6	0,0	3,6	1100	11. RECHERCHES NON ORIENTEES
2,0	-	1,0	4,6	1,0	0,3	1200	12. RECHERCHES NON VENTILEES
60,3	-	6,6	3,3	-	61,0	1300	13. DEFENSE
183,1	32,7	77,0	117,0	9,0	119,7	9900	TOTAL DES CREDITS
1987							
3,4	0,1	1,2	0,7	1,0	2,1	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
2,0	0,9	0,5	5,6	0,7	1,8	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,6	0,6	1,3	3,7	0,4	1,2	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
6,3	1,6	5,0	3,1	0,3	5,1	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
8,1	0,3	8,7	4,9	0,3	4,2	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
8,3	7,0	2,4	5,2	1,7	5,1	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
25,3	9,9	19,4	21,6	1,8	10,4	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
1,0	3,1	1,4	3,0	0,2	1,8	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
13,0	0,9	7,6	3,4	-	3,2	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
22,7	9,0	26,2	49,9	4,1	18,7	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
29,9	0,7	5,4	12,6	0,2	5,5	1100	11. RECHERCHES NON ORIENTEES
1,7	-	1,1	5,4	0,2	0,4	1200	12. RECHERCHES NON VENTILEES
64,9	-	6,1	3,4	-	60,4	1300	13. DEFENSE
188,2	34,1	86,6	122,6	10,9	119,9	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
PER 10,000 UNITS OF GDP

Nabs Objectives	Code	EUR 12	BL	DK	DE	GR	ES
1986							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	1,9	2,2	1,0	2,3	1,7	1,9
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	1,7	0,4	1,4	2,1	0,1	1,1
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	1,8	1,3	0,6	3,6	0,7	0,1
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	3,5	1,8	3,6	3,4	1,8	1,2
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	7,7	5,8	3,0	11,4	1,5	3,7
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	4,0	4,2	4,7	2,2	6,1	1,8
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	14,7	8,1	9,7	16,1	2,3	6,0
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	1,5	0,4	2,7	2,5	1,6	0,3
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	5,0	4,4	1,7	5,0	0,1	0,7
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	22,7	13,0	20,3	34,8	6,5	7,6
11. NON-ORIENTED RESEARCH	1100	11,2	13,2	11,6	13,5	1,5	7,7
12. OTHER CIVIL RESEARCH	1200	0,9	1,2	-	0,2	0,1	0,7
13. DEFENCE	1300	24,2	0,9	0,3	13,4	0,7	1,6
TOTAL EXPENDITURE	9900	100,7	56,9	60,5	110,4	24,5	34,5
1987							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	2,0	2,1	1,0	2,1	1,9	3,4
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	1,6	0,4	1,3	2,1	0,1	1,1
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	1,9	1,3	0,8	3,7	0,5	0,7
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	4,0	1,6	3,2	3,6	1,9	3,8
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	6,4	5,4	3,0	9,6	1,4	1,7
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	3,8	4,1	5,8	2,2	5,5	2,6
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	15,0	7,1	11,2	17,1	2,8	7,9
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	1,6	0,3	2,9	2,7	1,7	0,4
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	5,6	5,5	1,7	5,5	0,1	2,3
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	22,7	12,4	20,9	32,8	7,2	7,9
11. NON-ORIENTED RESEARCH	1100	11,4	13,4	14,0	14,0	1,7	3,5
12. OTHER CIVIL RESEARCH	1200	0,9	1,3	-	0,1	0,1	1,4
13. DEFENCE	1300	24,1	0,6	0,3	14,0	0,5	3,4
TOTAL EXPENDITURE	9900	101,1	55,4	66,2	109,6	25,3	40,1

FINANCEMENT DU R&D
PAR CHAPITRE DE NABS
PAR 10,000 UNITES DE PIB

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FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
1986							
2,6	0,3	1,0	0,6	3,4	2,2	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,6	1,8	0,7	4,0	3,7	1,9	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,4	0,4	0,7	2,9	0,9	1,2	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
4,1	2,1	3,6	2,6	0,1	4,7	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
6,3	0,6	11,0	3,9	1,4	4,9	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
6,0	11,1	2,8	4,3	5,6	5,6	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
19,2	13,4	15,4	16,5	2,2	12,0	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,8	4,5	0,9	2,5	0,4	1,6	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
9,7	0,9	4,7	3,0	-	3,1	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
17,2	10,4	19,5	39,1	10,2	18,7	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
21,8	1,0	4,8	9,5	0,2	3,7	1100	11. RECHERCHES NON ORIENTEES
1,5	-	0,9	3,7	3,6	0,3	1200	12. RECHERCHES NON VENTILEES
45,3	-	6,1	2,6	-	62,2	1300	13. DEFENSE
137,5	46,5	72,1	95,3	31,6	122,1	9900	TOTAL DES CREDITS
1987							
2,5	0,1	1,1	0,5	3,3	2,0	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
1,4	1,3	0,4	4,4	2,2	1,8	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
1,2	0,8	1,2	2,9	1,3	1,2	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
4,6	2,2	4,4	2,4	1,1	5,1	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
5,9	0,4	7,7	3,9	1,1	4,2	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
6,1	9,7	2,1	4,1	5,5	5,0	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
18,5	13,8	17,1	17,0	6,0	10,3	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
0,8	4,4	1,3	2,3	0,6	1,8	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
9,6	1,3	6,7	2,7	-	3,2	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
16,7	12,6	23,1	39,1	13,7	18,5	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
21,9	1,0	4,7	9,9	0,8	5,5	1100	11. RECHERCHES NON ORIENTEES
1,2	-	1,0	4,2	0,6	0,3	1200	12. RECHERCHES NON VENTILEES
47,5	-	5,4	2,7	-	59,9	1300	13. DEFENSE
138,0	47,8	76,2	96,1	36,2	118,9	9900	TOTAL DES CREDITS

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MIO PTA
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	6609	727948	1094064	69343	420067	1201790	12221
1.0 GENERAL RESEARCH	0188	-	:	:	:	102717	96523	:
1.1 MINERAL, OIL AND NATURAL GAS PROSPECTING	0110	4253	:	:	:	57417	592221	:
1.2 EXPLORATION AND EXPLOITATION OF THE SEA-BED	0120	-	:	:	:	30025	-	:
1.3 EARTH'S CRUST AND MANTLE EXCLUDING SEA-BED	0130	123	:	:	:	12134	155202	:
1.4 HYDROLOGY	0140	63	:	:	:	18130	310330	:
1.5 SEA AND OCEANS	0150	2	:	:	:	68676	15043	:
1.6 ATMOSPHERE	0160	2169	:	:	:	51038	25480	:
1.9 OTHER RESEARCH ON THE EXPLOR. AND EXPLOITATION OF THE EARTH	0190	-	:	:	:	79930	7000	:
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	26647	580896	207701	90659	421841	39834	3891
2.0 GENERAL RESEARCH	0288	-	:	:	:	16078	-	:
2.1 GENERAL PLANNING OF LAND USE	0210	32	:	:	:	66722	-	:
2.2 CONSTRUCTION AND PLANNING OF BUILDINGS	0220	-	:	:	:	24596	-	:
2.3 CIVIL ENGINEERING	0230	13	:	:	:	67347	36806	:
2.4 TRANSPORT SYSTEMS	0240	355	:	:	:	177485	3025	:
2.5 TELECOMMUNICATIONS SYSTEMS	0250	26247	:	:	:	49187	-	:
2.6 WATER SUPPLY	0260	-	:	:	:	20426	-	:
2.9 OTHER RESEARCH ON THE INFRAS. AND GENERAL PLANNING LAND-USE	0290	-	:	:	:	-	-	:
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	44875	697657	656316	57710	744385	322105	2641
3.0 GENERAL RESEARCH	0388	16161	:	:	:	415785	103703	:
3.1 WATER POLLUTION	0310	317	:	:	:	87867	68539	:
3.2 ATMOSPHERIC POLLUTION	0320	3155	:	:	:	58825	44914	:
3.3 SOIL AND SUBSTRATUM POLLUTION	0330	6206	:	:	:	25481	8023	:
3.4 NOISE AND VIBRATION	0340	203	:	:	:	23118	2500	:
3.5 RADIOACTIVE POLLUTION	0350	15896	:	:	:	85660	24417	:
3.6 THERMAL POLLUTION	0360	-	:	:	:	-	300	:
3.7 POLLUTION BY SOLID WASTE MAT.	0370	1281	:	:	:	47049	4200	:
3.9 OTHER SCIENT. RESEARCH ON THE POLLUTION OF THE ENVIRONMENT	0390	1655	:	:	:	600	65509	:
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	27326	1480971	839419	221542	721612	1222604	13434
4.0 GENERAL RESEARCH	0488	572	:	:	:	147733	301200	:
4.1 MEDICAL RESEARCH, HOSPITAL TREATMENT, SURGERY	0410	14844	:	:	:	287098	88602	:
4.2 PREVENTIVE MEDICINE	0420	7730	:	:	:	8517	63550	:
4.3 BIOLOGICAL ENGINEERING AND MEDICINES	0430	1760	:	:	:	114444	470565	:
4.4 OCCUPATIONAL MEDICINE	0440	2200	:	:	:	39834	500	:
4.5 NUTRITION AND FOOD HYGIENE	0450	220	:	:	:	41980	11237	:
4.6 DRUG ABUSE AND ADDICTION	0460	-	:	:	:	8600	-	:
4.7 SOCIAL MEDICINE	0470	-	:	:	:	21205	80660	:
4.8 HOSPITAL STRUCTURE AND ORGANISATION OF MEDICAL CARE	0480	-	:	:	:	29750	1400	:
4.9 OTHER MEDICAL RESEARCH	0490	-	:	:	:	22451	204890	:
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	381992	2344923	2779975	209311	1935585	881106	6071
5.0 GENERAL RESEARCH	0588	7300	:	:	:	195903	223553	:
5.1 FOSSIL FUELS AND THEIR DERIVATIVES	0510	31302	:	:	:	204862	20388	:
5.2 NUCLEAR FISSION	0520	123711	:	:	:	1017771	191600	:
5.3 NUCLEAR FUSION	0530	187141	:	:	:	187328	-	:
5.4 RENEWABLE ENERGY SOURCES	0540	30639	:	:	:	142538	322955	:
5.5 RATIONAL UTILIZAT. OF ENERGY	0550	1900	:	:	:	184563	115566	:
5.9 OTHER RES. ON PROD.,DISTRIB. AND RAT. UTILIZAT. OF ENERGY	0590	-	:	:	:	2620	7044	:
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	18068	1409381	2126772	401523	448958	3538829	9180

FR	IR	IT	NL	PO	UK		
1000 FF	1000 £	MIO LIT	1000 FL	1000 ESC	1000 £	Code	Objectifs Nabs
1311000	167	105334	23125	1639000	82746	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
:	-	14971	-	106800	71796	0188	1.0 RECHERCHES A CARACT. GENERAL
:	-	8482	1000	386400	2349	0110	1.1 PROSPECTION MINIERE, PETROLIERE ET GAZIERE
:	-	1742	-	101300	244	0120	1.2 EXPLORATION ET EXPLOITATION DES PLATEAUX IMMERGES
:	-	33338	980	59000	264	0130	1.3 CROUTE ET ENVELOPPE TERREST. HORMIS PLATEAUX IMMERGES
:	-	7226	730	90400	811	0140	1.4 HYDROLOGIE
:	-	20763	18221	543500	3330	0150	1.5 MERS ET OCEANS
:	167	7016	2190	148000	3927	0160	1.6 ATMOSPHERE
:	-	11796	-	203600	25	0190	1.9 AUTRES RECHER. CONC. EXPLORAT. ET EXPLOITAT. MILIEU TERREST.
762000	2505	42571	190149	1103600	72850	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
:	157	2228	-	197100	382	0288	2.0 RECHERCHES A CARACT. GENERAL
:	1460	14092	29787	6500	10255	0210	2.1 AMENAGEMENT GENERAL DU TERRITOIRE
:	696	6188	44803	105000	27516	0220	2.2 CONSTRUCTION ET AMENAGEMENT DE L'HABITAT
:	-	541	67775	671000	14657	0230	2.3 GENIE CIVIL
:	192	2217	31919	124000	15589	0240	2.4 SYSTEMES DE TRANSPORT
:	-	15803	250	-	1721	0250	2.5 SYST. DE TELECOMMUNICATIONS
:	-	541	15615	-	2730	0260	2.6 APPROVISIONNEMENT EN EAU
:	-	961	-	-	-	0290	2.9 AUTRES RECHER. CONC. INFRASTR. ET AMENAGEMENT DES ESPACES
622000	1583	114602	127582	636500	47963	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
:	169	60400	46570	-	2969	0388	3.0 RECHERCHES A CARACT. GENERAL
:	982	13685	20024	347400	5518	0310	3.1 POLLUTION DE L'EAU
:	277	9907	31019	11300	10039	0320	3.2 POLLUTION DE L'ATMOSPHERE
:	-	3604	6920	5000	3340	0330	3.3 POLLUTION DU SOL ET DU SOUS-SOL
:	114	4754	7240	-	4462	0340	3.4 BRUIT ET VIBRATIONS
:	-	19004	2779	229100	19811	0350	3.5 HUISSANCES RADIOACTIVES
:	-	-	-	-	-	0360	3.6 POLLUTION THERMIQUE
:	41	-	11987	18700	1824	0370	3.7 POLLUTION PAR DECHETS SOLIDES
:	-	3248	1043	25000	-	0390	3.9 AUTRES RECHER. CONC. POLLUTION DE L'ENVIRONNEMENT
2423000	4328	430354	105190	570100	205022	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
:	-	158458	15119	365000	175887	0488	4.0 RECHERCHES A CARACT. GENERAL
:	3681	91431	28062	100600	1693	0410	4.1 RECHERCHES MED., TRAITEMENT HOSPITALIER, CHIRURGIE
:	639	60212	19498	-	1917	0420	4.2 MEDECINE PREVENTIVE
:	-	72947	19676	67700	5431	0430	4.3 GENIE BIOMED. ET MEDICAMENTS
:	-	13876	-	-	-	0440	4.4 MEDECINE DU TRAVAIL
:	-	12615	16664	3000	6607	0450	4.5 HYGIENE ALIMENT. ET NUTRITION
:	8	3093	1771	-	387	0460	4.6 RISQUES DE TOXICOMANIE
:	-	9196	382	33800	641	0470	4.7 MEDECINE SOCIALE
:	-	1849	2610	-	6818	0480	4.8 STRUCTURES HOSPITALIERES ET ORGANISATION DES SOINS
:	-	6677	1408	-	5641	0490	4.9 AUTRES RECHERCHES MEDICALES
3127000	876	749266	168414	568300	170339	0500	5. PRODUCT., DISTRIB. ET UTILIS. RATIONNELLE DE L'ENERGIE
:	-	24566	79822	187900	351	0588	5.0 RECHERCHES A CARACT. GENERAL
:	45	10700	17267	-	6473	0510	5.1 COMBUSTIBLES FOSSILES ET DERIVES
:	-	303215	46781	-	113798	0520	5.2 FISSION NUCLEAIRE
:	-	127375	7286	-	20810	0530	5.3 FUSION NUCLEAIRE
:	434	91169	6868	190300	15353	0540	5.4 SOURCES D'ENERGIE REHOUELAB.
:	397	69188	8148	45700	4709	0550	5.5 UTILISATION RATIONNELLE DE L'ENERGIE
:	-	123053	2242	144400	8845	0590	5.9 AUT. RECHER. CONC. PRODUCTION, DISTRIB. ET UTIL. RAT. ENERG.
3188000	19135	207736	177682	2759000	203110	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MIO PTA
6.0 GENERAL RESEARCH	0688	1541	:	:	:	87178	236681	:
6.1 ANIMAL PRODUCTS	0610	837	:	:	:	38253	757145	:
6.2 FISHING AND FISH-FARMING	0620	-	:	:	:	45262	102350	:
6.3 VETERINARY MEDICINE	0630	2306	:	:	:	8997	187383	:
6.4 CROPS	0640	3682	:	:	:	126178	1650373	:
6.5 FORESTRY AND TIMBER PRODUCT.	0650	2664	:	:	:	51784	210000	:
6.6 FOOD TECHNOLOGY	0660	2059	:	:	:	57783	115448	:
6.9 OTHER RES. ON AGRICULTURAL PRODUCTION AND TECHNOLOGY	0690	4979	:	:	:	33523	279449	:
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	272459	5534393	3700018	778741	3434001	1801556	28070
7.0 GENERAL RESEARCH	0788	9566	:	:	:	470616	542523	:
7.1 INCREASING ECON. EFFICIENCY AND COMPETITIVENESS	0710	-	:	:	:	944896	61266	:
7.2 MANUFACT. AND PROCESSING TECH. AND MATERIALS RESEARCH	0720	48788	:	:	:	582674	386531	:
7.3 EXTRACT. AND PROCESSING OF NON ENERGY MIN. AND DERIVED PROD.	0730	21249	:	:	:	17675	-	:
7.4 PRODUCTS OF CHEMICAL INDUSTRY	0740	1430	:	:	:	7742	14323	:
7.4a PETROCHEMICAL AND COAL BY-PRODUCTS	0741	42	:	:	:	5000	94212	:
7.4b PHARMACEUTICAL PRODUCTS	0742	1388	:	:	:	-	41633	:
7.5 MANUFACT. OF MOTOR VEHICLES A. OTHER MEANS OF TRANSPORT	0750	-	:	:	:	838606	-	:
7.5a AEROSPACE EQUIPMENT MANUFACT. AND REPAIRING	0751	-	:	:	:	737415	1320	:
7.5b MANUFACTURE OF MOTOR VEHICLES AND PARTS	0752	-	:	:	:	-	2000	:
7.5c MANUFACTURE OF RAILWAY AND TRAMWAY EQUIPMENT	0753	-	:	:	:	-	-	:
7.5d SHIPBUILDING AND REPAIRING	0754	-	:	:	:	24927	9004	:
7.6 MANUF. OF OFFICE MACHINERY AND DATA-PROCESSING EQUIPMENT	0760	153334	:	:	:	234417	72805	:
7.7 ELECTRICAL AND ELECTRONIC ENGINEERING	0770	36352	:	:	:	297695	-	:
7.7a ELECTRICAL ENGINEERING	0771	-	:	:	:	:	27567	:
7.7b TELECOMMUNICATIONS EQUIPMENT	0772	36352	:	:	:	294795	361861	:
7.8 MECHAN. A. INSTRUMENT ENGIN. AND OTHER METAL INDUSTRIES	0780	-	:	:	:	33060	466	:
7.8a MECHANICAL ENGINEERING	0781	-	:	:	:	-	144635	:
7.8b MANUF. MED. AND SURGICAL EQUIP AND ORTHOPAEDIC APPLIANCES	0782	-	:	:	:	-	-	:
7.9 OTHER MANUFACTURING INDUST.	0790	1740	:	:	:	6620	-	:
7.9a FOOD, DRINK AND TOBACCO IND.	0791	-	:	:	:	160	32110	:
7.9b TEXTILE INDUSTRY	0792	40	:	:	:	1260	9320	:
7.9c RECYCLING OF WASTE	0793	1700	:	:	:	4945	-	:
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	8680	607198	137242	198859	546168	1091559	1318
8.0 GENERAL RESEARCH	0888	579	:	:	:	92674	563638	:
8.1 EDUC., TRAINING, RECURRENT EDUCATION AND RETRAINING	0810	-	:	:	:	174860	80425	:
8.2 CULTURAL ACTIVITIES	0820	4000	:	:	:	78009	57044	:
8.3 MANAGEMENT OF BUSINESSES AND INSTITUTIONS	0830	772	:	:	:	20872	56378	:
8.4 IMPROVEMENT OF WORKING COND.	0840	3329	:	:	:	63072	21976	:
8.5 SOCIAL SECURITY SYSTEM	0850	-	:	:	:	38943	46053	:
8.6 POLITICAL STRUCTURE OF SOC.	0860	-	:	:	:	43838	39155	:
8.7 SOCIAL CHANGE, SOC. PROCESSES AND SOCIAL CONFLICTS	0870	-	:	:	:	32329	37900	:
8.9 OTHER RESEARCH WITH REGARD TO SOCIETY	0890	-	:	:	:	1571	188990	:
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	10680	2071771	2860493	117525	1101630	49135	8149
9.0 GENERAL RESEARCH	0988	-	:	:	:	149450	49135	:
9.1 SCIENTIFIC EXPLORATION OF SPACE	0910	-	:	:	:	244622	-	:

FR	IR	IT	NL	PO	UK		
1000 FF	1000 £	MIO LIT	1000 FL	1000 ESC	1000 £	Code	Objectifs Nabs
:	2225	57792	136664	78800	21218	0688	6.0 RECHERCHES A CARACT. GENERAL
:	9012	9447	6897	543800	41769	0610	6.1 PRODUITS ANIMAUX
:	1180	7393	-	-	9961	0620	6.2 PECHE ET PISCICULTURE
:	643	2774	-	147800	26705	0630	6.3 MEDECINE VETERINAIRE
:	4175	41311	34121	1135100	86516	0640	6.4 PRODUITS VEGETAUX
:	1853	2944	-	223300	8269	0650	6.5 SYLVICULTURE ET INDUSTRIE DU BOIS
:	45	12683	-	483700	8285	0660	6.6 TECHNOLOGIE AGRO-ALIMENTAIRE
:	2	73392	-	146500	387	0690	6.9 AUT. RECHER. CONC. PRODUCTIV. ET TECHNOLOGIE DE L'AGRICUL.
9750000	27175	1665019	737242	2974600	417662	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
:	1335	155077	10662	750000	173980	0788	7.0 RECHERCHES A CARACT. GENERAL
:	17306	12421	531878	356500	2412	0710	7.1 ACCROISS. DE L'EFFICACITE ET COMPETITIVITE DE L'INDUSTRIE
:	1033	84922	31288	754800	29374	0720	7.2 TECHNIQ. FABRICAT. ENGINEERING ET RECHER. SUR LES MATERIAUX
:	1	33096	-	76600	1886	0730	7.3 EXTRACT. ET TRANSFORM. MINER. NON ENERGET. ET PROD. DERIVES
:	44	258980	12380	101200	3283	0740	7.4 PRODUITS DE L'INDUST. CHIMIQ.
:	-	124316	-	-	923	0741	7.4a PRODUITS DE LA PETROCHIMIE ET DE LA CARBOCHIMIE
:	-	122031	-	109500	875	0742	7.4b PRODUITS PHARMACEUTIQUES
:	14	66757	100716	-	111341	0750	7.5 CONSTRUCTION, MATERIEL DE TRANSPORT
:	-	61400	-	-	102773	0751	7.5a CONSTRUCTION AERONAUTIQUE
:	-	-	-	-	6092	0752	7.5b CONSTRUCTION DE MATERIEL DE TRANSPORT ROUTIER
:	-	-	-	-	-	0753	7.5c CONSTRUCTION DE MATERIEL FERROVIAIRE ROULANT
:	-	2000	-	-	2476	0754	7.5d CONSTRUCTION NAVALE
:	-	206295	-	127300	2831	0760	7.6 CONSTR. MACH. BUR. ET DE MACH. ET INSTAL. TRAIT. INFORMAT.
:	2465	467769	700	9700	63438	0770	7.7 MATERIEL ELECTRIQUE ET ELECTRONIQUE
:	29	34808	-	10200	57736	0771	7.7a CONSTRUCTION ELECTRIQUE
:	2436	397655	-	377700	5556	0772	7.7b MATERIEL DE TELECOMMUNICAT.
:	519	217333	5210	-	8960	0780	7.8 AUT. INDUS. TRANSFORM. METAUX ET MECANIQUE DE PRECISION
:	76	-	-	-	8209	0781	7.8a CONSTRUCTION DE MACHINES
:	45	-	-	-	89	0782	7.8b FABRIC. MATER. MED.-CHIRURGIC. ET APPAREILS ORTHOPEDIQUES
:	4458	162369	44408	-	20357	0790	7.9 AUT. INDUSTRIES MANUFACTUR.
:	4098	47673	-	301100	11251	0791	7.9a INDUSTRIE PRODUITS ALIMENT., BOISSONS ET DU TABAC
:	355	23139	-	-	2230	0792	7.9b INDUSTRIE TEXTILE
:	-	482	-	-	70	0793	7.9c RECYCLAGE DES DECHETS
3950000	8633	124217	100992	324000	72143	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
:	2796	19765	39324	6400	11646	0888	8.0 RECHERCHES A CARACT. GENERAL
:	1749	10814	22544	13600	43994	0810	8.1 ENSEIGNEMENT, FORMATION, PERFECTIONNEMENT ET RECYCLAGE
:	237	73126	17982	-	1359	0820	8.2 CULTURE
:	1933	6398	5356	16900	2472	0830	8.3 GESTION D'ENTREPRISES ET D'ADMINISTRATIONS
:	78	1107	-	-	475	0840	8.4 AMELIORATION DES CONDITIONS DE TRAVAIL
:	1608	4735	840	63800	1248	0850	8.5 ACTION SOCIALE
:	-	3206	6317	34200	513	0860	8.6 STRUCTURE POLITIQUE DE LA SOCIETE
:	136	4776	280	-	4560	0870	8.7 CHANGEMENT SOCIAL, PROCESSUS SOCIAUX, CONFLITS SOCIAUX
:	96	290	8349	189100	5876	0890	8.9 AUTRES RECHERCHES CONCERNANT LA VIE EN SOCIETE
5022000	2544	655088	116061	-	130291	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
:	2544	264126	3744	-	67574	0988	9.0 RECHERCHES A CARACT. GENERAL
:	-	100710	28458	-	1351	0910	9.1 EXPLORATION SCIENTIFIQUE DE L'ESPACE

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MID PTA
9.2 APPLIED RESEARCH PROGRAMMES	0920	10680	:	:	:	191845	-	:
9.3 LAUNCH SYSTEMS	0930	-	:	:	:	245268	-	:
9.4 SPACE LABORATORIES AND SPACE TRAVEL	0940	-	:	:	:	270445	-	:
9.9 OTHER RES. ON EXPLORATION AND EXPLOITATION OF SPACE	0990	-	:	:	:	-	-	:
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	8377241	6433450	1451948	6596234	4603970	28043
10.0 MULTI-DISCIPLINARY RESEARCH	1088	-	:	:	-	-	190675	:
10.1 MATHEMATICS AND NAT. SCIENCES	1010	-	:	:	460879	1982379	1245251	:
10.2 ENGINEERING SCIENCES	1020	-	:	:	207448	1183329	1222483	:
10.3 MEDICAL SCIENCES	1030	-	:	:	259176	1703359	1225442	:
10.4 AGRICULTURAL SCIENCES	1040	-	:	:	69340	396505	254338	:
10.5 SOCIAL SCIENCE AND HUMANITIES	1050	-	:	:	455105	1330662	495781	:
X10.1 EXPLORATION AND EXPLOITATION OF THE EARTH	1001	:	:	:	31864	:	:	:
X10.2 INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	1002	:	:	:	62618	:	:	:
X10.3 CONTROL OF ENVIRONMENTAL POLLUTION	1003	:	:	:	39183	:	:	:
X10.4 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	1004	:	:	:	180659	:	:	:
X10.5 PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	1005	:	:	:	46017	:	:	:
X10.6 AGRICULTURAL PRODUCTION AND TECHNOLOGY	1006	:	:	:	63283	:	:	:
X10.7 INDUSTRIAL PRODUCTION AND TECHNOLOGY	1007	:	:	:	106097	:	:	:
X10.8 SOCIAL STRUCTURES AND RELATIONSHIPS	1008	:	:	:	215505	:	:	:
X10.9 EXPLORATION AND EXPLOITATION OF SPACE	1009	:	:	:	14209	:	:	:
X10.0 OTHER CIVIL RESEARCH	1011	:	:	:	692513	:	:	:
11. NON-ORIENTED RESEARCH	1100	19485	4216763	6940287	970290	2820441	1064906	12487
11.0 MULTI-DISCIPLINARY RESEARCH	1188	240	:	:	:	537750	9875	:
11.1 MATHEMATICS AND NAT. SCIENCES	1110	10536	:	:	:	1950582	787318	:
11.2 ENGINEERING SCIENCES	1120	2246	:	:	:	82121	-	:
11.3 MEDICAL SCIENCES	1130	6463	:	:	:	96267	-	:
11.4 AGRICULTURAL SCIENCES	1140	-	:	:	:	8109	-	:
11.5 SOC. SCIENCES AND HUMANITIES	1150	-	:	:	:	145612	267713	:
12. OTHER CIVIL RESEARCH	1200	182	325321	682984	-	29053	70217	4863
13. DEFENCE	1300	-	8895543	306488	18021	2807431	314000	12173
TOTAL EXPENDITURE	9900	817002	37269952	28765200	4585472	22027392	16201611	142540

FR	IR	IT	NL	PO	UK		
1000 FF	1000 £	MIO LIT	1000 FL	1000 ESC	1000 £	Code	Objectifs Nabs
:	-	252661	-	-	51065	0920	9.2 SYSTEMES D'APPLICATION
:	-	37591	-	-	4199	0930	9.3 SYSTEMES DE LANCEMENT
:	-	-	75514	-	6102	0940	9.4 STATIONS ORBITALES ET ASTRONAUTIQUES
:	-	-	8345	-	-	0990	9.9 AUT. RECHER. CONC. EXPLORAT. ET EXPLOITATION DE L'ESPACE
8755000	24817	2246000	1700000	6815700	750000	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
:	-	-	95000	300	750000	1088	10.0 RECHERCHE INTERDISCIPLINAIRE
:	8705	674923	424943	3597900	-	1010	10.1 MATHEMATIQUES ET SCIENC. NAT.
:	5197	336900	243552	1261100	-	1020	10.2 SCIENCES DE L'INGENIEUR
:	3943	515457	399670	723400	-	1030	10.3 SCIENCES MEDICALES
:	1416	226846	103943	388800	-	1040	10.4 SCIENCES AGRICOLES
:	5556	491874	432892	844200	-	1050	10.5 SCIENCES SOCIALES ET HUMAINES
:	:	:	:	-	:	1001	X10.1 EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
:	:	:	:	-	:	1002	X10.2 INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
:	:	:	:	-	:	1003	X10.3 POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
:	:	:	:	-	:	1004	X10.4 PROTECTION ET PROMOTION DE LA SAUTE HUMAINE
:	:	:	:	-	:	1005	X10.5 PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
:	:	:	:	-	:	1006	X10.6 PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
:	:	:	:	-	:	1007	X10.7 PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
:	:	:	:	-	:	1008	X10.8 VIE EN SOCIETE (STRUCTURES ET RELATIONS)
:	:	:	:	-	:	1009	X10.9 EXPLORATION ET EXPLOITATION DE L'ESPACE
:	:	:	:	-	:	1011	X10.0 AUTRES RECHERCHES CIVILES
11532000	2004	461059	430161	389500	221387	1100	11. RECHERCHES NON ORIENTEES
:	-	7668	41150	-	72702	1188	11.0 RECHERCHE MULTIDISCIPLINAIRE
:	2004	415568	302833	88400	132727	1110	11.1 SCIENCES MATHEMATIQUES ET SCIENCES NATURELLES
:	-	10393	23779	301100	7181	1120	11.2 SCIENCES DE L'INGENIEUR
:	-	14297	23937	-	-	1130	11.3 SCIENCES MEDICALES
:	-	-	-	-	-	1140	11.4 SCIENCES AGRICOLES
:	-	13133	38462	-	8777	1150	11.5 SCIENCES SOCIALES ET HUMAINES
653000	-	98411	183834	318500	14077	1200	12. RECHERCHES NON VENTILEES
25000000	-	522000	116858	-	2421084	1300	13. DEFENSE
72540000	93767	7421657	4177286	18098800	4808674	9900	TOTAL DES CREDITS

Nabs Objectives	Code	EC/CE	EUR12	BL	DK	DE	GR	ES
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	6609	727948	25420	8795	202775	7693	85947
1.0 GENERAL RESEARCH	0188	-	:	:	:	49584	618	:
1.1 MINERAL, OIL AND NATURAL GAS PROSPECTING	0110	4253	:	:	:	27716	3791	:
1.2 EXPLORATION AND EXPLOITATION OF THE SEA-BED	0120	-	:	:	:	14494	-	:
1.3 EARTH'S CRUST AND MANTLE EXCLUDING SEA-BED	0130	123	:	:	:	5857	993	:
1.4 HYDROLOGY	0140	63	:	:	:	8752	1986	:
1.5 SEA AND OCEANS	0150	2	:	:	:	33151	96	:
1.6 ATMOSPHERE	0160	2169	:	:	:	24637	163	:
1.9 OTHER RESEARCH ON THE EXPLOR. AND EXPLOITATION OF THE EARTH	0190	-	:	:	:	38584	45	:
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	26647	580896	4826	11499	203632	255	27365
2.0 GENERAL RESEARCH	0288	-	:	:	:	7761	-	:
2.1 GENERAL PLANNING OF LAND USE	0210	32	:	:	:	32208	-	:
2.2 CONSTRUCTION AND PLANNING OF BUILDINGS	0220	-	:	:	:	11873	-	:
2.3 CIVIL ENGINEERING	0230	13	:	:	:	32510	236	:
2.4 TRANSPORT SYSTEMS	0240	355	:	:	:	85676	19	:
2.5 TELECOMMUNICATIONS SYSTEMS	0250	26247	:	:	:	23744	-	:
2.6 WATER SUPPLY	0260	-	:	:	:	9860	-	:
2.9 OTHER RESEARCH ON THE INFRASTR. AND GENERAL PLANNING LAND-USE	0290	-	:	:	:	-	-	:
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	44875	697657	15249	7320	359330	2062	18574
3.0 GENERAL RESEARCH	0388	16161	:	:	:	200708	664	:
3.1 WATER POLLUTION	0310	317	:	:	:	42415	439	:
3.2 ATMOSPHERIC POLLUTION	0320	3155	:	:	:	28396	288	:
3.3 SOIL AND SUBSTRATUM POLLUTION	0330	6206	:	:	:	12300	51	:
3.4 NOISE AND VIBRATION	0340	203	:	:	:	11160	16	:
3.5 RADIOACTIVE POLLUTION	0350	15896	:	:	:	41350	156	:
3.6 THERMAL POLLUTION	0360	-	:	:	:	-	2	:
3.7 POLLUTION BY SOLID WASTE MAT.	0370	1281	:	:	:	22712	27	:
3.9 OTHER SCIENT. RESEARCH ON THE POLLUTION OF THE ENVIRONMENT	0390	1655	:	:	:	290	419	:
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	27326	1480971	19504	28100	348337	7826	94478
4.0 GENERAL RESEARCH	0488	572	:	:	:	71314	1928	:
4.1 MEDICAL RESEARCH, HOSPITAL TREATMENT, SURGERY	0410	14844	:	:	:	138588	567	:
4.2 PREVENTIVE MEDICINE	0420	7730	:	:	:	4111	407	:
4.3 BICMEDICAL ENGINEERING AND MEDICINES	0430	1760	:	:	:	55245	3012	:
4.4 OCCUPATIONAL MEDICINE	0440	2200	:	:	:	19229	3	:
4.5 NUTRITION AND FOOD HYGIENE	0450	220	:	:	:	20265	72	:
4.6 DRUG ABUSE AND ADDICTION	0460	-	:	:	:	4151	-	:
4.7 SOCIAL MEDICINE	0470	-	:	:	:	10236	516	:
4.8 HOSPITAL STRUCTURE AND ORGANISATION OF MEDICAL CARE	0480	-	:	:	:	14361	9	:
4.9 OTHER MEDICAL RESEARCH	0490	-	:	:	:	10838	1312	:
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	381992	2344923	64592	26548	934348	5640	42696
5.0 GENERAL RESEARCH	0588	7300	:	:	:	94567	1431	:
5.1 FOSSIL FUELS AND THEIR DERIVATIVES	0510	31302	:	:	:	98891	131	:
5.2 NUCLEAR FISSION	0520	123711	:	:	:	491300	1226	:
5.3 NUCLEAR FUSION	0530	187141	:	:	:	90427	-	:
5.4 RENEWABLE ENERGY SOURCES	0540	30639	:	:	:	68806	2067	:
5.5 RATIONAL UTILIZAT. OF ENERGY	0550	1900	:	:	:	89092	740	:
5.9 OTHER RES. ON PROD.,DISTRIB. AND RAT. UTILIZAT. OF ENERGY	0590	-	:	:	:	1265	45	:
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	18068	1409381	49415	50928	216722	22653	64561

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
189219	215	70471	9907	10081	117424	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
:	-	10016	-	657	101885	0188	1.0 RECHERCHES A CARACT. GENERAL
:	-	5675	428	2377	3333	0110	1.1 PROSPECTION MINIERE, PETROLIERE ET GAZIERE
:	-	1165	-	623	346	0120	1.2 EXPLORATION ET EXPLOITATION DES PLATEAUX IMMERGES
:	-	22304	420	363	375	0130	1.3 CROUTE ET ENVELOPPE TERREST. HORMIS PLATEAUX IMMERGES
:	-	4834	313	556	1151	0140	1.4 HYDROLOGIE
:	-	13891	7806	3343	4726	0150	1.5 MERS ET OCEANS
:	215	4694	938	910	5573	0160	1.6 ATMOSPHERE
:	-	7892	-	1252	35	0190	1.9 AUTRES RECHER. CONC. EXPLORAT. ET EXPLOITAT. MILIEU TERREST.
109981	3230	28481	81459	6788	103380	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
:	202	1491	-	1212	542	0288	2.0 RECHERCHES A CARACT. GENERAL
:	1883	9428	12761	40	14553	0210	2.1 AMENAGEMENT GENERAL DU TERRITOIRE
:	898	4140	19194	646	39048	0220	2.2 CONSTRUCTION ET AMENAGEMENT DE L'HABITAT
:	-	362	29035	4127	20800	0230	2.3 GENIE CIVIL
:	248	1483	13674	763	22122	0240	2.4 SYSTEMES DE TRANSPORT
:	-	10573	107	-	2442	0250	2.5 SYST. DE TELECOMMUNICATIONS
:	-	362	6689	-	3874	0260	2.6 APPROVISIONNEMENT EN EAU
:	-	643	-	-	-	0290	2.9 AUTRES RECHER. CONC. INFRASTR. ET AMENAGEMENT DES ESPACES
89774	2041	76672	54656	3915	68064	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
:	218	40409	19950	-	4213	0388	3.0 RECHERCHES A CARACT. GENERAL
:	1266	9156	8578	2137	7831	0310	3.1 POLLUTION DE L'EAU
:	357	6628	13288	70	14246	0320	3.2 POLLUTION DE L'ATMOSPHERE
:	-	2411	2965	31	4740	0330	3.3 POLLUTION DU SOL ET DU SOUS-SOL
:	147	3181	3102	-	6332	0340	3.4 BRUIT ET VIBRATIONS
:	-	12714	1191	1409	28114	0350	3.5 NUISANCES RADIOACTIVES
:	-	-	-	-	-	0360	3.6 POLLUTION THERMIQUE
:	53	-	5135	115	2588	0370	3.7 POLLUTION PAR DECHETS SOLIDES
:	-	2173	447	154	-	0390	3.9 AUTRES RECHER. CONC. POLLUTION DE L'ENVIRONNEMENT
349716	5581	287918	45063	3507	290944	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
:	-	106013	6477	2245	249599	0488	4.0 RECHERCHES A CARACT. GENERAL
:	4747	61170	12022	619	2403	0410	4.1 RECHERCHES MED., TRAITEMENT HOSPITALIER, CHIRURGIE
:	824	40283	8353	-	2720	0420	4.2 MEDECINE PREVENTIVE
:	-	48804	8429	416	7707	0430	4.3 GENIE BIOMED. ET MEDICAMENTS
:	-	9283	-	-	-	0440	4.4 MEDECINE DU TRAVAIL
:	-	8440	7139	18	9376	0450	4.5 HYGIENE ALIMENT. ET NUTRITION
:	10	2069	759	-	549	0460	4.6 RISQUES DE TOXICOMANIE
:	-	6152	164	208	910	0470	4.7 MEDECINE SOCIALE
:	-	1237	1118	-	9675	0480	4.8 STRUCTURES HOSPITALIERES ET ORGANISATION DES SOINS
:	-	4467	603	-	8005	0490	4.9 AUTRES RECHERCHES MEDICALES
451326	1130	501279	72148	3495	241726	0500	5. PRODUCT., DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
:	-	16435	34196	1156	498	0588	5.0 RECHERCHES A CARACT. GENERAL
:	58	7159	7397	-	9186	0510	5.1 COMBUSTIBLES FOSSILES ET DERIVES
:	-	202859	20041	-	161489	0520	5.2 FISSION NUCLEAIRE
:	-	85217	3121	-	29531	0530	5.3 FUSION NUCLEAIRE
:	560	60995	2942	1170	21787	0540	5.4 SOURCES D'ENERGIE RENOUVELAB.
:	512	46289	3491	281	6682	0550	5.5 UTILISATION RATIONNELLE DE L'ENERGIE
:	-	82326	960	888	12552	0590	5.9 AUT. RECHER. CONC. PRODUCTION, DISTRIB. ET UTIL. RAT. ENERG.
460130	24676	138981	76119	16970	288231	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE

Nabs Objectives	Code	EC/CE	EUR12	BL	DK	DE	GR	ES
6.0 GENERAL RESEARCH	0688	1541	:	:	:	42083	1515	:
6.1 ANIMAL PRODUCTS	0610	837	:	:	:	18466	4847	:
6.2 FISHING AND FISH-FARMING	0620	-	:	:	:	21849	655	:
6.3 VETERINARY MEDICINE	0630	2306	:	:	:	4343	1199	:
6.4 CROPS	0640	3682	:	:	:	60909	10564	:
6.5 FORESTRY AND TIMBER PRODUCT.	0650	2664	:	:	:	24997	1344	:
6.6 FOOD TECHNOLOGY	0660	2059	:	:	:	27893	739	:
6.9 OTHER RES. ON AGRICULTURAL PRODUCTION AND TECHNOLOGY	0690	4979	:	:	:	16182	1789	:
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	272459	5534393	85969	98773	1657664	11532	197410
7.0 GENERAL RESEARCH	0788	9566	:	:	:	227176	3473	:
7.1 INCREASING ECON. EFFICIENCY AND COMPETITIVENESS	0710	-	:	:	:	456121	392	:
7.2 MANUFACT. AND PROCESSING TECH. AND MATERIALS RESEARCH	0720	48788	:	:	:	281269	2474	:
7.3 EXTRACT. AND PROCESSING OF NON ENERGY MIN. AND DERIVED PROD.	0730	21249	:	:	:	8532	-	:
7.4 PRODUCTS OF CHEMICAL INDUSTRY	0740	1430	:	:	:	3737	92	:
7.4a PETROCHEMICAL AND COAL BY-PRODUCTS	0741	42	:	:	:	2414	603	:
7.4b PHARMACEUTICAL PRODUCTS	0742	1388	:	:	:	-	267	:
7.5 MANUFACT. OF MOTOR VEHICLES A. OTHER MEANS OF TRANSPORT	0750	-	:	:	:	404813	-	:
7.5a AEROSPACE EQUIPMENT MANUFACT. AND REPAIRING	0751	-	:	:	:	355966	8	:
7.5b MANUFACTURE OF MOTOR VEHICLES AND PARTS	0752	-	:	:	:	-	13	:
7.5c MANUFACTURE OF RAILWAY AND TRAMWAY EQUIPMENT	0753	-	:	:	:	-	-	:
7.5d SHIPBUILDING AND REPAIRING	0754	-	:	:	:	12033	58	:
7.6 MANUF. OF OFFICE MACHINERY AND DATA-PROCESSING EQUIPMENT	0760	153334	:	:	:	113158	466	:
7.7 ELECTRICAL AND ELECTRONIC ENGINEERING	0770	36352	:	:	:	143704	-	:
7.7a ELECTRICAL ENGINEERING	0771	-	:	:	:	:	176	:
7.7b TELECOMMUNICATIONS EQUIPMENT	0772	36352	:	:	:	142304	2316	:
7.8 MECHAN. A. INSTRUMENT ENGIN. AND OTHER METAL INDUSTRIES	0780	-	:	:	:	15959	3	:
7.8a MECHANICAL ENGINEERING	0781	-	:	:	:	-	926	:
7.8b MANUF. MED. AND SURGICAL EQUIP AND ORTHOPAEDIC APPLIANCES	0782	-	:	:	:	-	-	:
7.9 OTHER MANUFACTURING INDUST.	0790	1740	:	:	:	3196	-	:
7.9a FOOD, DRINK AND TOBACCO IND.	0791	-	:	:	:	77	206	:
7.9b TEXTILE INDUSTRY	0792	40	:	:	:	608	60	:
7.9c RECYCLING OF WASTE	0793	1700	:	:	:	2387	-	:
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	8680	607198	3189	25223	263647	6987	9269
8.0 GENERAL RESEARCH	0888	579	:	:	:	44736	3608	:
8.1 EDUC., TRAINING, RECURRENT EDUCATION AND RETRAINING	0810	-	:	:	:	84409	515	:
8.2 CULTURAL ACTIVITIES	0820	4000	:	:	:	37657	365	:
8.3 MANAGEMENT OF BUSINESSES AND INSTITUTIONS	0830	772	:	:	:	10075	361	:
8.4 IMPROVEMENT OF WORKING COND.	0840	3329	:	:	:	30446	141	:
8.5 SOCIAL SECURITY SYSTEM	0950	-	:	:	:	18799	295	:
8.6 POLITICAL STRUCTURE OF SOC.	0860	-	:	:	:	21162	251	:
8.7 SOCIAL CHANGE, SOC. PROCESSES AND SOCIAL CONFLICTS	0870	-	:	:	:	15606	243	:
8.9 OTHER RESEARCH WITH REGARD TO SOCIETY	0890	-	:	:	:	758	1210	:
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	10680	2071771	66463	14907	531780	315	57310
9.0 GENERAL RESEARCH	0988	-	:	:	:	72143	315	:
9.1 SCIENTIFIC EXPLORATION OF SPACE	0910	-	:	:	:	118084	-	:

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
:	2869	38664	58547	485	30110	0688	6.0 RECHERCHES A CARACT. GENERAL
:	11622	6320	2955	3345	59274	0610	6.1 PRODUITS ANIMAUX
:	1522	4946	-	-	14136	0620	6.2 PECHE ET PISCICULTURE
:	829	1856	-	909	37897	0630	6.3 MEDECINE VETERINAIRE
:	5384	27638	14617	6982	122774	0640	6.4 PRODUITS VEGETAUX
:	2390	1970	-	1373	11734	0650	6.5 SYLVICULTURE ET INDUSTRIE DU BOIS
:	58	8485	-	2975	11757	0660	6.6 TECHNOLOGIE AGRO-ALIMENTAIRE
:	3	49101	-	901	549	0690	6.9 AUT. RECHER. CONC. PRODUCTIV. ET TECHNOLOGIE DE L'AGRICUL.
1407235	35044	1113942	315833	18296	592698	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
:	1722	103751	4568	4613	246893	0788	7.0 RECHERCHES A CARACT. GENERAL
:	22318	8310	227855	2193	3423	0710	7.1 ACCROISS. DE L'EFFICACITE ET COMPETITIVITE DE L'INDUSTRIE
:	1332	56815	13404	4643	41684	0720	7.2 TECHNIQ. FABRICAT., ENGINEERING ET RECHER. SUR LES MATERIAUX
:	1	22142	-	471	2676	0730	7.3 EXTRACT. ET TRANSFORM. MINER. NON ENERGET. ET PROD. DERIVES
:	57	173265	5304	622	4659	0740	7.4 PRODUITS DE L'INDOUST. CHIMIQ.
:	-	83171	-	-	1310	0741	7.4a PRODUITS DE LA PETROCHIMIE ET DE LA CARBOCHIMIE
:	-	81642	-	674	1242	0742	7.4b PRODUITS PHARMACEUTIQUES
:	18	44662	43147	-	158002	0750	7.5 CONSTRUCTION, MATERIEL DE TRANSPORT
:	-	41078	-	-	145844	0751	7.5a CONSTRUCTION AERONAUTIQUE
:	-	-	-	-	8645	0752	7.5b CONSTRUCTION DE MATERIEL DE TRANSPORT ROUTIER
:	-	-	-	-	-	0753	7.5c CONSTRUCTION DE MATERIEL FERROVIAIRE ROULANT
:	-	1338	-	-	3514	0754	7.5d CONSTRUCTION NAVALE
:	-	138017	-	783	4017	0760	7.6 CONSTR. MACH. BUR. ET DE MACH. ET INSTAL. TRAIT. INFORMAT.
:	3179	312950	300	60	90024	0770	7.7 MATERIEL ELECTRIQUE ET ELECTRONIQUE
:	37	23287	-	63	81932	0771	7.7a CONSTRUCTION ELECTRIQUE
:	3141	266042	-	2323	7884	0772	7.7b MATERIEL DE TELECOMMUNICAT.
:	669	145402	2232	-	12715	0780	7.8 AUT. INDUS. TRANSFORM. METAUX ET MECANIQUE DE PRECISION
:	98	-	-	-	11649	0781	7.8a CONSTRUCTION DE MACHINES
:	58	-	-	-	126	0782	7.8b FABRIC. MATER. MED.-CHIRURGIC. ET APPAREILS ORTHOPEDIQUES
:	5749	108629	19024	-	28888	0790	7.9 AUT. INDUSTRIES MANUFACTUR.
:	5285	31895	-	1852	15966	0791	7.9a INDUSTRIE PRODUITS ALIMENT., BOISSONS ET DU TABAC
:	458	15481	-	-	3165	0792	7.9b INDUSTRIE TEXTILE
:	-	322	-	-	99	0793	7.9c RECYCLAGE DES DECHETS
57011	11133	83105	43265	1993	102377	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
:	3606	13223	16846	39	16527	0838	8.0 RECHERCHES A CARACT. GENERAL
:	2255	7235	9658	84	62431	0810	8.1 ENSEIGNEMENT, FORMATION, PERFECTIONNEMENT ET RECYCLAGE
:	306	48923	7703	-	1929	0820	8.2 CULTURE
:	2493	4280	2294	104	3508	0830	8.3 GESTION D'ENTREPRISES ET D'ADMINISTRATIONS
:	101	741	-	-	674	0840	8.4 AMELIORATION DES CONDITIONS DE TRAVAIL
:	2074	3168	360	392	1771	0850	8.5 ACTION SOCIALE
:	-	2145	2706	210	728	0860	8.6 STRUCTURE POLITIQUE DE LA SOCIETE
:	175	3195	120	-	6471	0870	8.7 CHANGEMENT SOCIAL, PROCESSUS SOCIAUX, CONFLITS SOCIAUX
:	124	194	3577	1163	8339	0890	8.9 AUTRES RECHERCHES CONCERNANT LA VIE EN SOCIETE
724834	3281	438271	49720	-	184894	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
:	3281	176707	1604	-	95893	0988	9.0 RECHERCHES A CARACT. GENERAL
:	-	67378	12191	-	1917	0910	9.1 EXPLORATION SCIENTIFIQUE DE L'ESPACE

R&D FINANCING
 BY SECTION AND OUTSECTION OF NABS
 IN 1000 ECU
 AT CURRENT VALUES AND EXCHANGE RATES

1987

Nabs Objectives	Code	EC/CE	EUR12	BL	DK	DE	GR	ES
9.2 APPLIED RESEARCH PROGRAMMES	0920	10680	:	:	:	92608	-	:
9.3 LAUNCH SYSTEMS	0930	-	:	:	:	118396	-	:
9.4 SPACE LABORATORIES AND SPACE TRAVEL	0940	-	:	:	:	130550	-	:
9.9 OTHER RES. ON EXPLORATION AND EXPLOITATION OF SPACE	0990	-	:	:	:	-	-	:
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	8377241	149479	184161	3184141	29471	197220
10.0 MULTI-DISCIPLINARY RESEARCH	1088	-	:	:	-	-	1221	:
10.1 MATHEMATICS AND NAT. SCIENCES	1010	-	:	:	58457	956936	7971	:
10.2 ENGINEERING SCIENCES	1020	-	:	:	26312	571218	7825	:
10.3 MEDICAL SCIENCES	1030	-	:	:	32873	822247	7844	:
10.4 AGRICULTURAL SCIENCES	1040	-	:	:	8795	191401	1628	:
10.5 SOCIAL SCIENCE AND HUMANITIES	1050	-	:	:	57724	642339	3174	:
X10.1 EXPLORATION AND EXPLOITATION OF THE EARTH	1001	:	:	:	4042	:	:	:
X10.2 INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	1002	:	:	:	7942	:	:	:
X10.3 CONTROL OF ENVIRONMENTAL POLLUTION	1003	:	:	:	4970	:	:	:
X10.4 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	1004	:	:	:	22914	:	:	:
X10.5 PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	1005	:	:	:	5837	:	:	:
X10.6 AGRICULTURAL PRODUCTION AND TECHNOLOGY	1006	:	:	:	8027	:	:	:
X10.7 INDUSTRIAL PRODUCTION AND TECHNOLOGY	1007	:	:	:	13457	:	:	:
X10.8 SOCIAL STRUCTURES AND RELATIONSHIPS	1008	:	:	:	27334	:	:	:
X10.9 EXPLOATION AND EXPLOITATION OF SPACE	1009	:	:	:	1802	:	:	:
X10.0 OTHER CIVIL RESEARCH	1011	:	:	:	87836	:	:	:
11. NON-ORIENTED RESEARCH	1100	19485	4216763	161255	123069	1361486	6817	87818
11.0 MULTI-DISCIPLINARY RESEARCH	1188	240	:	:	:	259583	63	:
11.1 MATHEMATICS AND NAT. SCIENCES	1110	10536	:	:	:	941587	5040	:
11.2 ENGINEERING SCIENCES	1120	2246	:	:	:	39642	-	:
11.3 MEDICAL SCIENCES	1130	6463	:	:	:	46470	-	:
11.4 AGRICULTURAL SCIENCES	1140	-	:	:	:	3914	-	:
11.5 SOC. SCIENCES AND HUMANITIES	1150	-	:	:	:	70290	1714	:
12. OTHER CIVIL RESEARCH	1200	182	325321	15869	-	14024	449	34200
13. DEFENCE	1300	-	8895543	7121	2286	1355206	2010	85610
TOTAL EXPENDITURE	9900	817002	37269952	668349	581608	10633087	103710	1002451

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
:	-	169037	-	-	72466	0920	9.2 SYSTEMES D'APPLICATION
:	-	25149	-	-	5959	0930	9.3 SYSTEMES DE LANCEMENT
:	-	-	32350	-	8659	0940	9.4 STATIONS ORBITALES ET ASTRONAUTIQUES
:	-	-	3575	-	-	0990	9.9 AUT. RECHER. CONC. EXPLORAT. ET EXPLOITATION DE L'ESPACE
1263625	32004	1502634	728276	41922	1064314	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
:	-	-	40698	2	1064314	1088	10.0 RECHERCHE INTERDISCIPLINAIRE
:	11226	451542	182045	22130	-	1010	10.1 MATHÉMATIQUES ET SCIENC. NAT.
:	6702	225395	104337	7757	-	1020	10.2 SCIENCES DE L'INGENIEUR
:	5085	344854	171218	4449	-	1030	10.3 SCIENCES MÉDICALES
:	1826	151766	44529	2391	-	1040	10.4 SCIENCES AGRICOLES
:	7165	329077	185450	5192	-	1050	10.5 SCIENCES SOCIALES ET HUMAINES
-	:	:	:	-	:	1001	X10.1 EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
-	:	:	:	-	:	1002	X10.2 INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
-	:	:	:	-	:	1003	X10.3 POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
-	:	:	:	-	:	1004	X10.4 PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
-	:	:	:	-	:	1005	X10.5 PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
-	:	:	:	-	:	1006	X10.6 PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
-	:	:	:	-	:	1007	X10.7 PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
-	:	:	:	-	:	1008	X10.8 VIE EN SOCIETE (STRUCTURES ET RELATIONS)
-	:	:	:	-	:	1009	X10.9 EXPLORATION ET EXPLOITATION DE L'ESPACE
-	:	:	:	-	:	1011	X10.0 AUTRES RECHERCHES CIVILES
1664434	2584	308461	184280	2396	314167	1100	11. RECHERCHES NON ORIENTEES
:	-	5130	17629	-	103170	1188	11.0 RECHERCHE MULTIDISCIPLINAIRE
:	2584	278026	129733	544	188351	1110	11.1 SCIENCES MATHÉMATIQUES ET SCIENCES NATURELLES
:	-	6953	10187	1852	10190	1120	11.2 SCIENCES DE L'INGENIEUR
:	-	9565	10255	-	-	1130	11.3 SCIENCES MÉDICALES
:	-	-	-	-	-	1140	11.4 SCIENCES AGRICOLES
:	-	8786	16477	-	12455	1150	11.5 SCIENCES SOCIALES ET HUMAINES
94249	-	65840	78754	1959	19976	1200	12. RECHERCHES NON VENTILEES
3608295	-	349232	50062	-	3435726	1300	13. DEFENSE
10469830	120921	4965289	1789540	111322	6823921	9900	TOTAL DES CREDITS

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	100,0	100,0	100,0	100,0	100,0	100,0	100,0
1.0 GENERAL RESEARCH	0188	-	:	:	:	24,5	8,0	:
1.1 MINERAL, OIL AND NATURAL GAS PROSPECTING	0110	64,3	:	:	:	13,7	49,3	:
1.2 EXPLORATION AND EXPLOITATION OF THE SEA-BED	0120	-	:	:	:	7,1	-	:
1.3 EARTH'S CRUST AND MANTLE EXCLUDING SEA-BED	0130	1,9	:	:	:	2,9	12,9	:
1.4 HYDROLOGY	0140	1,0	:	:	:	4,3	25,8	:
1.5 SEA AND OCEANS	0150	-	:	:	:	16,3	1,3	:
1.6 ATMOSPHERE	0160	32,8	:	:	:	12,1	2,1	:
1.9 OTHER RESEARCH ON THE EXPLOR. AND EXPLOITATION OF THE EARTH	0190	-	:	:	:	19,0	0,6	:
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	100,0	100,0	100,0	100,0	100,0	100,0	100,0
2.0 GENERAL RESEARCH	0288	-	:	:	:	3,8	-	:
2.1 GENERAL PLANNING OF LAND USE	0210	0,1	:	:	:	15,8	-	:
2.2 CONSTRUCTION AND PLANNING OF BUILDINGS	0220	-	:	:	:	5,8	-	:
2.3 CIVIL ENGINEERING	0230	-	:	:	:	16,0	92,4	:
2.4 TRANSPORT SYSTEMS	0240	1,3	:	:	:	42,1	7,6	:
2.5 TELECOMMUNICATIONS SYSTEMS	0250	98,5	:	:	:	11,7	-	:
2.6 WATER SUPPLY	0260	-	:	:	:	4,8	-	:
2.9 OTHER RESEARCH ON THE INFRASTR. AND GENERAL PLANNING LAND-USE	0290	-	:	:	:	-	-	:
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	100,0	100,0	100,0	100,0	100,0	100,0	100,0
3.0 GENERAL RESEARCH	0388	36,0	:	:	:	55,9	32,2	:
3.1 WATER POLLUTION	0310	0,7	:	:	:	11,8	21,3	:
3.2 ATMOSPHERIC POLLUTION	0320	7,0	:	:	:	7,9	13,9	:
3.3 SOIL AND SUBSTRATUM POLLUTION	0330	13,8	:	:	:	3,4	2,5	:
3.4 NOISE AND VIBRATION	0340	0,5	:	:	:	3,1	0,8	:
3.5 RADIOACTIVE POLLUTION	0350	35,4	:	:	:	11,5	7,6	:
3.6 THERMAL POLLUTION	0360	-	:	:	:	-	0,1	:
3.7 POLLUTION BY SOLID WASTE MAT.	0370	2,9	:	:	:	6,3	1,3	:
3.9 OTHER SCIENT. RESEARCH ON THE POLLUTION OF THE ENVIRONMENT	0390	3,7	:	:	:	0,1	20,3	:
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	100,0	100,0	100,0	100,0	100,0	100,0	100,0
4.0 GENERAL RESEARCH	0488	2,1	:	:	:	20,5	24,6	:
4.1 MEDICAL RESEARCH, HOSPITAL TREATMENT, SURGERY	0410	54,3	:	:	:	39,8	7,2	:
4.2 PREVENTIVE MEDICINE	0420	28,3	:	:	:	1,2	5,2	:
4.3 BIOMEDICAL ENGINEERING AND MEDICINES	0430	6,4	:	:	:	15,9	38,5	:
4.4 OCCUPATIONAL MEDICINE	0440	8,1	:	:	:	5,5	-	:
4.5 NUTRITION AND FOOD HYGIENE	0450	0,8	:	:	:	5,8	0,9	:
4.6 DRUG ABUSE AND ADDICTION	0460	-	:	:	:	1,2	-	:
4.7 SOCIAL MEDICINE	0470	-	:	:	:	2,9	6,6	:
4.8 HOSPITAL STRUCTURE AND ORGANISATION OF MEDICAL CARE	0480	-	:	:	:	4,1	0,1	:
4.9 OTHER MEDICAL RESEARCH	0490	-	:	:	:	3,1	16,8	:
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	100,0	100,0	100,0	100,0	100,0	100,0	100,0
5.0 GENERAL RESEARCH	0588	1,9	:	:	:	10,1	25,4	:
5.1 FOSSIL FUELS AND THEIR DERIVATIVES	0510	8,2	:	:	:	10,6	2,3	:
5.2 NUCLEAR FISSION	0520	32,4	:	:	:	52,6	21,7	:
5.3 NUCLEAR FUSION	0530	49,0	:	:	:	9,7	-	:
5.4 RENEWABLE ENERGY SOURCES	0540	8,0	:	:	:	7,4	36,7	:
5.5 RATIONAL UTILIZAT. OF ENERGY	0550	0,5	:	:	:	9,5	13,1	:
5.9 OTHER RES. ON PROD.,DISTRIB. AND RAT. UTILIZAT. OF ENERGY	0590	-	:	:	:	0,1	0,8	:
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
100,0	100,0	100,0	100,0	100,0	100,0	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
:	-	14,2	-	6,5	86,8	0188	1.0 RECHERCHES A CARACT. GENERAL
:	-	8,1	4,3	23,6	2,8	0110	1.1 PROSPECTION MINIERE, PETROLIERE ET GAZIERE
:	-	1,7	-	6,2	0,3	0120	1.2 EXPLORATION ET EXPLOITATION DES PLATEAUX IMMERGES
:	-	31,6	4,2	3,6	0,3	0130	1.3 CROUTE ET ENVELOPPE TERREST. HORMIS PLATEAUX IMMERGES
:	-	6,9	3,2	5,5	1,0	0140	1.4 HYDROLOGIE
:	-	19,7	78,8	33,2	4,0	0150	1.5 MERS ET OCEANS
:	100,0	6,7	9,5	9,0	4,7	0160	1.6 ATMOSPHERE
:	-	11,2	-	12,4	-	0190	1.9 AUTRES RECHER. CONC. EXPLORAT. ET EXPLOITAT. MILIEU TERREST.
100,0	100,0	100,0	100,0	100,0	100,0	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
:	6,3	5,2	-	17,9	0,5	0288	2.0 RECHERCHES A CARACT. GENERAL
:	58,3	33,1	15,7	0,6	14,1	0210	2.1 AMENAGEMENT GENERAL DU TERRITOIRE
:	27,8	14,5	23,6	9,5	37,8	0220	2.2 CONSTRUCTION ET AMENAGEMENT DE L'HABITAT
:	-	1,3	35,6	60,8	20,1	0230	2.3 GENIE CIVIL
:	7,7	5,2	16,8	11,2	21,4	0240	2.4 SYSTEMES DE TRANSPORT
:	-	37,1	0,1	-	2,4	0250	2.5 SYST. DE TELECOMMUNICATIONS
:	-	1,3	8,2	-	3,7	0260	2.6 APPROVISIONNEMENT EN EAU
:	-	2,3	-	-	-	0290	2.9 AUTRES RECHER. CONC. INFRASTR. ET AMENAGEMENT DES ESPACES
100,0	100,0	100,0	100,0	100,0	100,0	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
:	10,7	52,7	36,5	-	6,2	0388	3.0 RECHERCHES A CARACT. GENERAL
:	62,0	11,9	15,7	54,6	11,5	0310	3.1 POLLUTION DE L'EAU
:	17,5	8,6	24,3	1,8	20,9	0320	3.2 POLLUTION DE L'ATMOSPHERE
:	-	3,1	5,4	0,8	7,0	0330	3.3 POLLUTION DU SOL ET DU SOUS-SOL
:	7,2	4,1	5,7	-	9,3	0340	3.4 BRUIT ET VIBRATIONS
:	-	16,6	2,2	36,0	41,3	0350	3.5 NUISANCES RADIOACTIVES
:	-	-	-	-	-	0360	3.6 POLLUTION THERMIQUE
:	2,6	-	9,4	2,9	3,8	0370	3.7 POLLUTION PAR DECHETS SOLIDES
:	-	2,8	0,8	3,9	-	0390	3.9 AUTRES RECHER. CONC. POLLUTION DE L'ENVIRONNEMENT
100,0	100,0	100,0	100,0	100,0	100,0	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
:	-	36,8	14,4	64,0	85,8	0488	4.0 RECHERCHES A CARACT. GENERAL
:	85,1	21,2	26,7	17,6	0,8	0410	4.1 RECHERCHES MED., TRAITEMENT HOSPITALIER, CHIRURGIE
:	14,8	14,0	18,5	-	0,9	0420	4.2 MEDECINE PREVENTIVE
:	-	17,0	18,7	11,9	2,6	0430	4.3 GENIE BIOMED. ET MEDICAMENTS
:	-	3,2	-	-	-	0440	4.4 MEDECINE DU TRAVAIL
:	-	2,9	15,8	0,5	3,2	0450	4.5 HYGIENE ALIMENT. ET NUTRITION
:	0,2	0,7	1,7	-	0,2	0460	4.6 RISQUES DE TOXICOMANIE
:	-	2,1	0,4	5,9	0,3	0470	4.7 MEDECINE SOCIALE
:	-	0,4	2,5	-	3,3	0480	4.8 STRUCTURES HOSPITALIERES ET ORGANISATION DES SOINS
:	-	1,6	1,3	-	2,8	0490	4.9 AUTRES RECHERCHES MEDICALES
100,0	100,0	100,0	100,0	100,0	100,0	0500	5. PRODUCT., DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
:	-	3,3	47,4	33,1	0,2	0588	5.0 RECHERCHES A CARACT. GENERAL
:	5,1	1,4	10,3	-	3,8	0510	5.1 COMBUSTIBLES FOSSILES ET DERIVES
:	-	40,5	27,8	-	66,8	0520	5.2 FISSION NUCLEAIRE
:	-	17,0	4,3	-	12,2	0530	5.3 FUSION NUCLEAIRE
:	49,5	12,2	4,1	33,5	9,0	0540	5.4 SOURCES D'ENERGIE RENOUVELAB.
:	45,3	9,2	4,8	8,0	2,8	0550	5.5 UTILISATION RATIONNELLE DE L'ENERGIE
:	-	16,4	1,3	25,4	5,2	0590	5.9 AUT. RECHER. CONC. PRODUCTION, DISTRIB. ET UTIL. RAT. ENERG.
100,0	100,0	100,0	100,0	100,0	100,0	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
6.0 GENERAL RESEARCH	0688	8,5	:	:	:	19,4	6,7	:
6.1 ANIMAL PRODUCTS	0610	4,6	:	:	:	8,5	21,4	:
6.2 FISHING AND FISH-FARMING	0620	-	:	:	:	10,1	2,9	:
6.3 VETERINARY MEDICINE	0630	12,8	:	:	:	2,0	5,3	:
6.4 CROPS	0640	20,4	:	:	:	28,1	46,6	:
6.5 FORESTRY AND TIMBER PRODUCT.	0650	14,7	:	:	:	11,5	5,9	:
6.6 FOOD TECHNOLOGY	0660	11,4	:	:	:	12,9	3,3	:
6.9 OTHER RES. ON AGRICULTURAL PRODUCTION AND TECHNOLOGY	0690	27,6	:	:	:	7,5	7,9	:
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	100,0	100,0	100,0	100,0	100,0	100,0	100,0
7.0 GENERAL RESEARCH	0788	3,5	:	:	:	13,7	30,1	:
7.1 INCREASING ECON. EFFICIENCY AND COMPETITIVENESS	0710	-	:	:	:	27,5	3,4	:
7.2 MANUFACT. AND PROCESSING TECH. AND MATERIALS RESEARCH	0720	17,9	:	:	:	17,0	21,5	:
7.3 EXTRACT. AND PROCESSING OF NON ENERGY MIN. AND DERIVED PROD.	0730	7,8	:	:	:	0,5	-	:
7.4 PRODUCTS OF CHEMICAL INDUSTRY	0740	0,5	:	:	:	0,2	0,8	:
7.4a PETROCHEMICAL AND COAL BY- PRODUCTS	0741	-	:	:	:	0,1	5,2	:
7.4b PHARMACEUTICAL PRODUCTS	0742	0,5	:	:	:	-	2,3	:
7.5 MANUFACT. OF MOTOR VEHICLES A. OTHER MEANS OF TRANSPORT	0750	-	:	:	:	24,4	-	:
7.5a AEROSPACE EQUIPMENT MANUFACT. AND REPAIRING	0751	-	:	:	:	21,5	0,1	:
7.5b MANUFACTURE OF MOTOR VEHICLES AND PARTS	0752	-	:	:	:	-	0,1	:
7.5c MANUFACTURE OF RAILWAY AND TRAMWAY EQUIPMENT	0753	-	:	:	:	-	-	:
7.5d SHIPBUILDING AND REPAIRING	0754	-	:	:	:	0,7	0,5	:
7.6 MANUF. OF OFFICE MACHINERY AND DATA-PROCESSING EQUIPMENT	0760	56,3	:	:	:	6,8	4,0	:
7.7 ELECTRICAL AND ELECTRONIC ENGINEERING	0770	13,3	:	:	:	8,7	-	:
7.7a ELECTRICAL ENGINEERING	0771	-	:	:	:	-	1,5	:
7.7b TELECOMMUNICATIONS EQUIPMENT	0772	13,3	:	:	:	8,6	20,1	:
7.8 MECHAN. A. INSTRUMENT ENGIN. AND OTHER METAL INDUSTRIES	0780	-	:	:	:	1,0	-	:
7.8a MECHANICAL ENGINEERING	0781	-	:	:	:	-	8,0	:
7.8b MANUF. MED. AND SURGICAL EQUIP AND ORTHOPAEDIC APPLIANCES	0782	-	:	:	:	-	-	:
7.9 OTHER MANUFACTURING INDUST.	0790	0,6	:	:	:	0,2	-	:
7.9a FOOD, DRINK AND TOBACCO IND.	0791	-	:	:	:	-	1,8	:
7.9b TEXTILE INDUSTRY	0792	-	:	:	:	-	0,5	:
7.9c RECYCLING OF WASTE	0793	0,6	:	:	:	0,1	-	:
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	100,0	100,0	100,0	100,0	100,0	100,0	100,0
8.0 GENERAL RESEARCH	0888	6,7	:	:	:	17,0	51,6	:
8.1 EDUC., TRAINING, RECURRENT EDUCATION AND RETRAINING	0810	-	:	:	:	32,0	7,4	:
8.2 CULTURAL ACTIVITIES	0820	46,1	:	:	:	14,3	5,2	:
8.3 MANAGEMENT OF BUSINESSES AND INSTITUTIONS	0830	8,9	:	:	:	3,8	5,2	:
8.4 IMPROVEMENT OF WORKING COND.	0840	38,4	:	:	:	11,5	2,0	:
8.5 SOCIAL SECURITY SYSTEM	0850	-	:	:	:	7,1	4,2	:
8.6 POLITICAL STRUCTURE OF SOC.	0860	-	:	:	:	8,0	3,6	:
8.7 SOCIAL CHANGE, SOC. PROCESSES AND SOCIAL CONFLICTS	0870	-	:	:	:	5,9	3,5	:
8.9 OTHER RESEARCH WITH REGARD TO SOCIETY	0890	-	:	:	:	0,3	17,3	:
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	100,0	100,0	100,0	100,0	100,0	100,0	100,0
9.0 GENERAL RESEARCH	0988	-	:	:	:	13,6	100,0	:
9.1 SCIENTIFIC EXPLORATION OF SPACE	0910	-	:	:	:	22,2	-	:

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
:	11,6	27,8	76,9	2,9	10,4	0688	6.0 RECHERCHES A CAPACT. GENERAL
:	47,1	4,5	3,9	19,7	20,6	0610	6.1 PRODUITS ANIMAUX
:	6,2	3,6	-	-	4,9	0620	6.2 PECHE ET PISCICULTURE
:	3,4	1,3	-	5,4	13,1	0630	6.3 MEDECINE VETERINAIRE
:	21,8	19,9	19,2	41,1	42,6	0640	6.4 PRODUITS VEGETAUX
:	9,7	1,4	-	8,1	4,1	0650	6.5 SYLVICULTURE ET INDUSTRIE DU BOIS
:	0,2	6,1	-	17,5	4,1	0660	6.6 TECHNOLOGIE AGRO-ALIMENTAIRE
:	-	35,3	-	5,3	0,2	0690	6.9 AUT. RECHER. CONC. PRODUCTIV. ET TECHNOLOGIE DE L'AGRICUL.
100,0	100,0	100,0	100,0	100,0	100,0	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
:	4,9	9,3	:	25,2	41,7	0788	7.0 RECHERCHES A CARACT. GENERAL
:	63,7	0,7	:	12,0	0,6	0710	7.1 ACCROISS. DE L'EFFICACITE ET COMPETITIVITE DE L'INDUSTRIE
:	3,8	5,1	:	25,4	7,0	0720	7.2 TECHNIQ. FABRICAT., ENGINEERING ET RECHER. SUR LES MATERIAUX
:	-	2,0	:	2,6	0,5	0730	7.3 EXTRACT. ET TRANSFORM. MINER. NON ENERGET. ET PROD. DERIVES
:	0,2	15,6	:	3,4	0,8	0740	7.4 PRODUITS DE L'INDUST. CHIMIQ.
:	-	7,5	:	-	0,2	0741	7.4a PRODUITS DE LA PETROCHIMIE ET DE LA CARBOCHIMIE
:	-	7,3	:	3,7	0,2	0742	7.4b PRODUITS PHARMACEUTIQUES
:	0,1	4,0	:	-	26,7	0750	7.5 CONSTRUCTION, MATERIEL DE TRANSPORT
:	-	3,7	:	-	24,6	0751	7.5a CONSTRUCTION AERONAUTIQUE
:	-	-	:	-	1,5	0752	7.5b CONSTRUCTION DE MATERIEL DE TRANSPORT ROUTIER
:	-	-	:	-	-	0753	7.5c CONSTRUCTION DE MATERIEL FERROVIAIRE ROULANT
:	-	0,1	:	-	0,6	0754	7.5d CONSTRUCTION NAVALE
:	-	12,4	:	4,3	0,7	0760	7.6 CONSTR. MACH. BUR. ET DE MACH. ET INSTAL. TRAIT. INFORMAT.
:	9,1	28,1	:	0,3	15,2	0770	7.7 MATERIEL ELECTRIQUE ET ELECTRONIQUE
:	0,1	2,1	:	0,3	13,8	0771	7.7a CONSTRUCTION ELECTRIQUE
:	9,0	23,9	:	12,7	1,3	0772	7.7b MATERIEL DE TELECOMMUNICAT.
:	1,9	13,1	:	-	2,1	0780	7.8 AUT. INDUS. TRANSFORM. METAUX ET MECANIQUE DE PRECISION
:	0,3	-	:	-	2,0	0781	7.8a CONSTRUCTION DE MACHINES
:	0,2	-	:	-	-	0782	7.8b FABRIC. MATER. MED.-CHIRURGIC. ET APPAREILS ORTHOPEDIQUES
:	16,4	9,8	:	-	4,9	0790	7.9 AUT. INDUSTRIES MANUFACTUR.
:	15,1	2,9	:	10,1	2,7	0791	7.9a INDUSTRIE PRODUITS ALIMENT., BOISSONS ET DU TABAC
:	1,3	1,4	:	-	0,5	0792	7.9b INDUSTRIE TEXTILE
:	-	-	:	-	-	0793	7.9c RECYCLAGE DES DECHETS
100,0	100,0	100,0	100,0	100,0	100,0	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
:	32,4	15,9	:	2,0	16,1	0888	8.0 RECHERCHES A CARACT. GENERAL
:	20,3	8,7	:	4,2	61,0	0810	8.1 ENSEIGNEMENT, FORMATION, PERFECTIONNEMENT ET RECYCLAGE
:	2,7	58,9	:	-	1,9	0820	8.2 CULTURE
:	22,4	5,2	:	5,2	3,4	0830	8.3 GESTION D'ENTREPRISES ET D'ADMINISTRATIONS
:	0,9	0,9	:	-	0,7	0840	8.4 AMELIORATION DES CONDITIONS DE TRAVAIL
:	18,6	3,8	:	19,7	1,7	0850	8.5 ACTION SOCIALE
:	-	2,6	:	10,6	0,7	0860	8.6 STRUCTURE POLITIQUE DE LA SOCIETE
:	1,6	3,8	:	-	6,3	0870	8.7 CHANGEMENT SOCIAL, PROCESSUS SOCIAUX, CONFLITS SOCIAUX
:	1,1	0,2	:	58,4	8,1	0890	8.9 AUTRES RECHERCHES CONCERNANT LA VIE EN SOCIETE
100,0	100,0	100,0	100,0	-	100,0	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
:	100,0	40,3	3,2	-	51,9	0988	9.0 RECHERCHES A CARACT. GENERAL
:	-	15,4	24,5	-	1,0	0910	9.1 EXPLORATION SCIENTIFIQUE DE L'ESPACE

Nabs Objectives	Code	EC/CE	EUR 12	BL	DK	DE	GR	ES
9.2 APPLIED RESEARCH PROGRAMMES	0920	100,0	:	:	:	17,4	-	:
9.3 LAUNCH SYSTEMS	0930	-	:	:	:	22,3	-	:
9.4 SPACE LABORATORIES AND SPACE TRAVEL	0940	-	:	:	:	24,5	-	:
9.9 OTHER RES. ON EXPLORATION AND EXPLOITATION OF SPACE	0990	-	:	:	:	-	-	:
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	-	100,0	100,0	100,0	100,0	100,0	100,0
10.0 MULTI-DISCIPLINARY RESEARCH	1088	-	:	:	-	-	4,1	:
10.1 MATHEMATICS AND NAT. SCIENCES	1010	-	:	:	31,7	30,1	27,0	:
10.2 ENGINEERING SCIENCES	1020	-	:	:	14,3	17,9	26,6	:
10.3 MEDICAL SCIENCES	1030	-	:	:	17,9	25,8	26,6	:
10.4 AGRICULTURAL SCIENCES	1040	-	:	:	4,8	6,0	5,5	:
10.5 SOCIAL SCIENCE AND HUMANITIES	1050	-	:	:	31,3	20,2	10,8	:
X10.1 EXPLORATION AND EXPLOITATION OF THE EARTH	1001	:	:	:	2,2	:	:	:
X10.2 INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	1002	:	:	:	4,3	:	:	:
X10.3 CONTROL OF ENVIRONMENTAL POLLUTION	1003	:	:	:	2,7	:	:	:
X10.4 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	1004	:	:	:	12,4	:	:	:
X10.5 PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	1005	:	:	:	3,2	:	:	:
X10.6 AGRICULTURAL PRODUCTION AND TECHNOLOGY	1006	:	:	:	4,4	:	:	:
X10.7 INDUSTRIAL PRODUCTION AND TECHNOLOGY	1007	:	:	:	7,3	:	:	:
X10.8 SOCIAL STRUCTURES AND RELATIONSHIPS	1008	:	:	:	14,8	:	:	:
X10.9 EXPLORATION AND EXPLOITATION OF SPACE	1009	:	:	:	1,0	:	:	:
X10.0 OTHER CIVIL RESEARCH	1011	:	:	:	47,7	:	:	:
11. NON-ORIENTED RESEARCH	1100	100,0	100,0	100,0	100,0	100,0	100,0	100,0
11.0 MULTI-DISCIPLINARY RESEARCH	1188	1,2	:	:	:	19,1	0,9	:
11.1 MATHEMATICS AND NAT. SCIENCES	1110	54,1	:	:	:	69,2	73,9	:
11.2 ENGINEERING SCIENCES	1120	11,5	:	:	:	2,9	-	:
11.3 MEDICAL SCIENCES	1130	33,2	:	:	:	3,4	-	:
11.4 AGRICULTURAL SCIENCES	1140	-	:	:	:	0,3	-	:
11.5 SOC. SCIENCES AND HUMANITIES	1150	-	:	:	:	5,2	25,1	:
12. OTHER CIVIL RESEARCH	1200	100,0	100,0	100,0	-	100,0	100,0	100,0
13. DEFENCE	1300	-	100,0	100,0	100,0	100,0	100,0	100,0
TOTAL EXPENDITURE	9900	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
:	-	38,6	-	-	39,2	0920	9.2 SYSTEMES D'APPLICATION
:	-	5,7	-	-	3,2	0930	9.3 SYSTEMES DE LANCEMENT
:	-	-	65,1	-	4,7	0940	9.4 STATIONS ORBITALES ET ASTRONAUTIQUES
:	-	-	7,2	-	-	0990	9.9 AUT. RECHER. CONC. EXPLORAT. ET EXPLOITATION DE L'ESPACE
100,0	100,0	100,0	100,0	100,0	100,0	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
:	-	-	5,6	-	100,0	1088	10.0 RECHERCHE INTERDISCIPLINAIRE
:	35,1	30,0	25,0	52,8	-	1010	10.1 MATHÉMATIQUES ET SCIENC. NAT.
:	20,9	15,0	14,3	18,5	-	1020	10.2 SCIENCES DE L'INGÉNIEUR
:	15,9	22,9	23,5	10,6	-	1030	10.3 SCIENCES MÉDICALES
:	5,7	10,1	6,1	5,7	-	1040	10.4 SCIENCES AGRICOLES
:	22,4	21,9	25,5	12,4	-	1050	10.5 SCIENCES SOCIALES ET HUMAINES
-	:	:	:	-	:	1001	X10.1 EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
-	:	:	:	-	:	1002	X10.2 INFRASTRUCTURES ET AMÉNAGEMENT DES ESPACES
-	:	:	:	-	:	1003	X10.3 POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PRÉVENTION)
-	:	:	:	-	:	1004	X10.4 PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
-	:	:	:	-	:	1005	X10.5 PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ÉNERGIE
-	:	:	:	-	:	1006	X10.6 PRODUCTIVITÉ ET TECHNOLOGIE DE L'AGRICULTURE
-	:	:	:	-	:	1007	X10.7 PRODUCTIVITÉ ET TECHNOLOGIE INDUSTRIELLES
-	:	:	:	-	:	1008	X10.8 VIE EN SOCIÉTÉ (STRUCTURES ET RELATIONS)
-	:	:	:	-	:	1009	X10.9 EXPLORATION ET EXPLOITATION DE L'ESPACE
-	:	:	:	-	:	1011	X10.0 AUTRES RECHERCHES CIVILES
100,0	100,0	100,0	100,0	100,0	100,0	1100	11. RECHERCHES NON ORIENTÉES
:	-	1,7	9,6	-	32,8	1188	11.0 RECHERCHE MULTIDISCIPLINAIRE
:	100,0	90,1	70,4	22,7	60,0	1110	11.1 SCIENCES MATHÉMATIQUES ET SCIENCES NATURELLES
:	-	2,3	5,5	77,3	3,2	1120	11.2 SCIENCES DE L'INGÉNIEUR
:	-	3,1	5,6	-	-	1130	11.3 SCIENCES MÉDICALES
:	-	-	-	-	-	1140	11.4 SCIENCES AGRICOLES
:	-	2,8	8,9	-	4,0	1150	11.5 SCIENCES SOCIALES ET HUMAINES
100,0	-	100,0	100,0	100,0	100,0	1200	12. RECHERCHES NON VENTILÉES
100,0	-	100,0	100,0	-	100,0	1300	13. DÉFENSE
100,0	100,0	100,0	100,0	100,0	100,0	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
AS A CONTRIBUTION TO MULTILATERAL AND BILATERAL PROJECTS
IN NATIONAL CURRENCIES, AT CURRENT VALUES

Nabs Objectives	Code	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MIO PTA
1986							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	:	:	-	5300	:	:
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	:	:	50	9200	:	:
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	:	:	-	6500	:	:
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	:	:	-	4500	:	:
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	:	:	2713	427400	:	:
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	:	:	-	28600	:	:
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	:	:	-	433100	:	:
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	:	:	356	11000	:	:
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	:	:	96048	710500	:	:
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	:	:	-	-	:	:
11. NON-ORIENTED RESEARCH	1100	:	:	146335	362700	:	:
12. OTHER CIVIL RESEARCH	1200	:	:	-	-	:	:
13. DEFENCE	1300	:	:	-	422700	:	:
TOTAL EXPENDITURE	9900	:	:	245502	2421500	:	:
1987							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	:	:	-	14200	:	2514
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	:	:	50	21800	:	-
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	:	:	-	11700	:	-
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	:	:	-	4100	:	-
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	:	:	1351	206300	:	2497
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	:	:	21960	34200	:	84
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	:	:	-	610800	:	-
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	:	:	249	11500	:	-
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	:	:	101605	800200	:	5400
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	:	:	100	-	:	-
11. NON-ORIENTED RESEARCH	1100	:	:	133688	376300	:	-
12. OTHER CIVIL RESEARCH	1200	:	:	-	-	:	1180
13. DEFENCE	1300	:	:	-	624300	:	-
TOTAL EXPENDITURE	9900	:	:	259003	2715400	:	11674

FINANCEMENT DU R&D
PAR CHAPITRE DE NABS
A DES ACTIONS BI- ET MULTILATERALES
EN MONNAIES NATIONALES, A PRIX COURANTS

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FR	IR	IT	NL	PO	UK		
1000 FF	1000 £	MIO LIT	1000 FL	1000 ESC	1000 £	Code	Objectifs Nabs
1986							
202000	-	333	-	:	1655	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
112000	593	8	-	:	173	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
41000	44	197	-	:	-	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
154000	-	3469	880	:	6021	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
848000	99	-	20250	:	19764	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
427000	1391	10528	-	:	5894	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
1342000	605	2429	-	:	95728	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
140000	869	2259	-	:	171	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
2260000	1600	215000	118825	:	68434	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
-	957	-	-	:	-	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
1951000	21	92762	68555	:	62495	1100	11. RECHERCHES NON ORIENTEES
38000	-	-	343	:	89	1200	12. RECHERCHES NON VENTILEES
-	-	-	1975	:	20638	1300	13. DEFENSE
7515000	6179	326985	210828	:	281062	9900	TOTAL DES CREDITS
1987							
338000	-	451	-	:	1581	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
106000	154	7	-	:	26	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
98000	21	159	-	:	19	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
248000	-	9838	875	:	6554	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
187000	101	-	20000	:	6956	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
766000	1251	8702	-	:	6957	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
1112000	613	2549	-	:	101597	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
60000	853	2994	-	:	117	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
2846000	2544	232200	103972	:	78896	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
-	3575	-	-	:	-	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
1795000	57	94263	68796	:	65848	1100	11. RECHERCHES NON ORIENTEES
-	-	-	693	:	299	1200	12. RECHERCHES NON VENTILEES
-	-	-	2012	:	275952	1300	13. DEFENSE
7556000	9169	351163	196348	:	544602	9900	TOTAL DES CREDITS

R&D FINANCING
 BY CHAPTERS OF NABS
 AS A CONTRIBUTION TO MULTILATERAL AND BILATERAL PROJECTS
 IN NATIONAL CURRENCIES, AT CURRENT VALUES

Nabs Objectives	Code	EUR 12	BL	DK	DE	GR	ES
		1000 ECU	1000 FB	1000 DKR	1000 DM	1000 DRA	MIO PTA
1988							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	:	:	-	14500	:	1195
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	:	:	50	22100	:	-
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	:	:	-	12900	:	-
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	:	:	-	4500	:	-
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	:	:	850	182900	:	3283
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	:	:	23850	34700	:	84
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	:	:	-	621600	:	-
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	:	:	299	11700	:	-
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	:	:	107650	852800	:	8095
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	:	:	106	-	:	-
11. NON-ORIENTED RESEARCH	1100	:	:	140110	388600	:	-
12. OTHER CIVIL RESEARCH	1200	:	:	-	-	:	2045
13. DEFENCE	1300	:	:	-	658900	:	-
TOTAL EXPENDITURE	9900	:	:	272915	2805200	:	14701

FINANCEMENT DU R&D
PAR CHAPITRE DE NABS
A DES ACTIONS BI- ET MULTILATERALES
EN MONNAIES NATIONALES, A PRIX COURANTS

14

FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
1000 FF	1000 £	MIO LIT	1000 FL	1000ESC	1000 £		
1988							
350000	-	471	-	:	1625	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
93000	130	7	-	:	20	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
113000	18	165	-	:	-	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
266000	-	10166	875	:	6899	0400	4. PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
220000	85	-	20750	:	9951	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
788000	1059	9088	-	:	7500	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
1244000	519	2714	-	:	136582	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
63000	722	3081	-	:	112	0800	8. VIE EN SOCIÉTÉ (STRUCTURES ET RELATIONS)
3198000	2153	392000	125568	:	87380	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
-	3026	-	-	:	-	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
1857000	48	99472	68077	:	64915	1100	11. RECHERCHES NON ORIENTÉES
-	-	-	658	:	318	1200	12. RECHERCHES NON VENTILÉES
-	-	-	2050	:	288369	1300	13. DEFENSE
8192000	7760	517164	217978	:	603671	9900	TOTAL DES CREDITS

R&D FINANCING
BY CHAPTERS OF NABS
AS A CONTRIBUTION TO MULTILATERAL AND BILATERAL PROJECTS
IN MID ECU AT CURRENT VALUES AND EXCHANGE RATES

Nabs Objectives	Code	EUR 12	BL	DK	DE	GR	ES
1986							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	:	:	-	2490	:	:
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	:	:	6	4323	:	:
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	:	:	-	3054	:	:
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	:	:	-	2114	:	:
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	:	:	342	200828	:	:
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	:	:	-	13439	:	:
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	:	:	-	203506	:	:
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	:	:	45	5169	:	:
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	:	:	12103	333852	:	:
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	:	:	-	-	:	:
11. NON-ORIENTED RESEARCH	1100	:	:	18440	170427	:	:
12. OTHER CIVIL RESEARCH	1200	:	:	-	-	:	:
13. DEFENCE	1300	:	:	-	198620	:	:
TOTAL EXPENDITURE	9900	:	:	30937	1137821	:	:
1987							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	:	:	-	6855	:	17680
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	:	:	6	10523	:	-
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	:	:	-	5648	:	-
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	:	:	-	1979	:	-
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	:	:	171	99585	:	17561
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	:	:	2785	16509	:	591
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	:	:	-	294846	:	-
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	:	:	32	5551	:	-
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	:	:	12887	386273	:	37977
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	:	:	13	-	:	-
11. NON-ORIENTED RESEARCH	1100	:	:	16957	181648	:	-
12. OTHER CIVIL RESEARCH	1200	:	:	-	-	:	8299
13. DEFENCE	1300	:	:	-	301363	:	-
TOTAL EXPENDITURE	9900	:	:	32851	1310780	:	82101

FINANCEMENT DU R&D
PAR CHAPITRE DE NABS
A DES ACTIONS BI- ET MULTILATERALES
EN MIO ECU A PRIX ET TAUX DE CHANGE COURA

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FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
1986							
29707	-	228	-	:	2464	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
16471	808	5	-	:	258	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
6030	60	135	-	:	-	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
22648	-	2373	367	:	8966	0400	4. PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
124710	135	-	8434	:	29431	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
62796	1896	7202	-	:	8777	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
197360	825	1662	-	:	142550	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
20589	1185	1545	-	:	255	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
332365	2181	147072	49492	:	101906	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
-	1305	-	-	:	-	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
286922	29	63454	28554	:	93062	1100	11. RECHERCHES NON ORIENTEES
5588	-	-	143	:	133	1200	12. RECHERCHES NON VENTILEES
-	-	-	823	:	30732	1300	13. DEFENSE
1105186	8424	223675	87812	:	418532	9900	TOTAL DES CREDITS
1987							
48784	-	302	-	:	2244	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
15299	199	5	-	:	37	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
14145	27	106	-	:	27	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
35794	-	6582	375	:	9301	0400	4. PROTECTION ET PROMOTION DE LA SANTÉ HUMAINE
26990	130	-	8568	:	9871	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
110558	1613	5822	-	:	9873	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
160497	791	1705	-	:	144175	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
8660	1100	2003	-	:	166	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
410768	3281	155348	44541	:	111960	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
-	4610	-	-	:	-	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
259076	74	63064	29472	:	93444	1100	11. RECHERCHES NON ORIENTEES
-	-	-	297	:	424	1200	12. RECHERCHES NON VENTILEES
-	-	-	862	:	391600	1300	13. DEFENSE
1090571	11824	234938	84115	:	772837	9900	TOTAL DES CREDITS

R&D FINANCING
 BY CHAPTERS OF NABS
 AS A CONTRIBUTION TO MULTILATERAL AND BILATERAL PROJECTS
 IN MIO ECU AT CURRENT VALUES AND EXCHANGE RATES

Nabs Objectives	Code	EUR 12	BL	DK	DE	GR	ES
1988							
1. EXPLORATION AND EXPLOITATION OF THE EARTH	0100	:	:	-	6989	:	8632
2. INFRASTRUCTURE AND GENERAL PLANNING OF LAND-USE	0200	:	:	6	10652	:	-
3. CONTROL OF ENVIRONMENTAL POLLUTION	0300	:	:	-	6218	:	-
4. PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0400	:	:	-	2169	:	-
5. PRODUCTION, DISTRIBUTION AND RAT. UTILIZATION OF ENERGY	0500	:	:	107	88155	:	23714
6. AGRICULTURAL PRODUCTION AND TECHNOLOGY	0600	:	:	2998	16725	:	607
7. INDUSTRIAL PRODUCTION AND TECHNOLOGY	0700	:	:	-	299602	:	-
8. SOCIAL STRUCTURES AND RELATIONSHIPS	0800	:	:	38	5639	:	-
9. EXPLORATION AND EXPLOITATION OF SPACE	0900	:	:	13533	411037	:	58472
10. RESEARCH FINANCED FROM GEN. UNIV. FUNDS (GUF)	1000	:	:	13	-	:	-
11. NON-ORIENTED RESEARCH	1100	:	:	17613	187300	:	-
12. OTHER CIVIL RESEARCH	1200	:	:	-	-	:	14772
13. DEFENCE	1300	:	:	-	317580	:	-
TOTAL EXPENDITURE	9900	:	:	34308	1352066	:	106189

FINANCEMENT DU R&D
PAR CHAPITRE DE NABS
A DES ACTIONS BI- ET MULTILATERALES
EN MIO ECU A PRIX ET TAUX DE CHANGE COURS

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FR	IR	IT	NL	PO	UK	Code	Objectifs Nabs
							1988
49749	-	306	-	:	2443	0100	1. EXPLORATION ET EXPLOITATION DU MILIEU TERRESTRE
13219	168	5	-	:	30	0200	2. INFRASTRUCTURES ET AMENAGEMENT DES ESPACES
16062	23	107	-	:	-	0300	3. POLLUTION DE L'ENVIRONNEMENT (LUTTE ET PREVENTION)
37809	-	6606	376	:	10373	0400	4. PROTECTION ET PROMOTION DE LA SANTE HUMAINE
31271	110	-	8910	:	14961	0500	5. PRODUCT.,DISTRIBUT. ET UTILIS. RATIONNELLE DE L'ENERGIE
112005	1365	5905	-	:	11276	0600	6. PRODUCTIVITE ET TECHNOLOGIE DE L'AGRICULTURE
176821	669	1763	-	:	205353	0700	7. PRODUCTIVITE ET TECHNOLOGIE INDUSTRIELLES
8955	931	2002	-	:	168	0800	8. VIE EN SOCIETE (STRUCTURES ET RELATIONS)
454560	2776	254709	53918	:	131377	0900	9. EXPLORATION ET EXPLOITATION DE L'ESPACE
-	3981	-	-	:	-	1000	10. RECHERCHE FINANCEE PAR FONDS GENERAUX DES UNIVERSITES
263952	62	64634	29232	:	97601	1100	11. RECHERCHES NON ORIENTEES
-	-	-	283	:	478	1200	12. RECHERCHES NON VENTILEES
-	-	-	880	:	433567	1300	13. DEFENSE
1164402	10004	336037	93599	:	907627	9900	TOTAL DES CREDITS

Period Période	EUR-12	BL	DK	DE	GR	ES	FR	IRL	IT	NL	PO	UK	
	IMPLICITE INDEX GDP						INDICE IMPLICITE PIB						
1980	100,10	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	
1981	111,00	104,90	110,10	104,00	119,80	112,00	111,40	117,40	118,50	105,50	115,80	111,50	
1982	122,40	112,40	121,70	108,60	149,80	127,40	124,40	135,30	137,70	111,90	142,10	119,90	
1983	132,90	119,00	131,00	112,10	178,40	142,20	136,60	149,30	158,80	114,00	177,30	126,10	
1984	141,60	125,00	138,50	114,30	214,60	157,80	146,70	160,80	175,00	116,10	218,80	131,40	
1985	150,10	131,90	145,90	116,80	252,70	171,40	155,20	168,80	190,50	118,10	266,20	139,30	
1986	158,40	136,70	153,00	120,40	300,80	190,20	162,40	178,30	205,80	118,90	309,40	144,20	
1987	164,60	139,30	161,30	123,00	347,60	201,60	167,50	184,70	216,80	116,90	349,30	150,20	
		FB	DKR	DM	DRA	PTA	FF	£	LIT	FL	ESC	£	
	EXCHANGE RATES						1 EUA / UCE			TAUX DE CHANGE			
1980		40,5979	7,82736	2,52421	59,3228	99,7017	5,86895	0,67600	1189,205	2,76027	69,5521	0,598488	
1981		41,2946	7,92255	2,51390	61,6261	102,6756	6,03992	0,69102	1263,180	2,77510	68,4947	0,553110	
1982		44,7115	8,15687	2,37599	65,3418	107,5576	6,43117	0,68960	1323,779	2,61390	78,0066	0,560454	
1983		45,4380	8,13188	2,27052	78,0883	127,5026	6,77078	0,71496	1349,924	2,53720	98,6886	0,587014	
1984		45,4420	8,14647	2,23811	88,3403	126,5693	6,87165	0,72594	1381,381	2,52334	115,6801	0,590626	
1985		44,9136	8,01876	2,22632	105,7390	129,1645	6,79502	0,71517	1447,987	2,51101	130,2515	0,588977	
1986		43,7978	7,93565	2,12819	137,4246	137,4563	6,79976	0,73353	1461,874	2,40089	147,0884	0,671542	
1987		43,0392	7,88413	2,07159	156,2204	142,1915	6,92848	0,77544	1494,708	2,33428	162,5811	0,704679	
1987		42,9222	7,83076	2,07221	152,3900	145,7430	6,90315	0,77649	1477,240	2,33947	160,7250	0,715957	
1988		43,4195	7,95477	2,07475	166,1930	138,4420	7,03537	0,77569	1539,010	2,32885	169,9860	0,665109	
		1 PPA / SPA											
1980		42,400	8,410	2,660	38,300	69,700	5,870	0,537	857,0	2,700	31,200	0,511	
1981		40,100	8,350	2,490	41,400	70,400	5,900	0,568	916,0	2,570	32,500	0,513	
1982		38,900	8,370	2,360	46,900	72,600	5,970	0,593	964,0	2,470	36,200	0,500	
1983		38,000	8,300	2,240	51,500	74,600	6,030	0,603	1024,0	2,320	41,600	0,485	
1984		37,400	8,230	2,150	58,100	77,600	6,080	0,610	1059,0	2,210	48,200	0,474	
1985		37,200	8,170	2,070	64,500	79,600	6,070	0,603	1087,0	2,120	55,300	0,474	
1986		36,600	8,130	2,020	72,800	83,600	6,020	0,604	1113,0	2,030	60,900	0,465	
1987		35,900	8,220	1,990	81,100	85,100	5,940	0,597	1132,0	1,930	65,700	0,467	

Period Période	EUR-12 MRD ECU	BL MIO FB	DK MIO DKR	DE MIO DM	GR MIO DRA	ES MRD PTA	FR MIO FF	IRL MIO £	IT MRD LIT	NL MIO FL	PO MIO ESC	UK MIO £	
	TOTAL BUDGETS IN NATIONAL CURRENCIES AT CURRENT						ENSEMBLE DU BUDGET EN MONNAIES NATIONALES A PRIX COURANTS						
1980	621,9	1354400	124800	409700	411900	0	590800	4824	123973	110200	0	95081	
1981	735,6	1583600	145900	436600	651800	0	726300	5919	162948	139500	0	104400	
1982	840,9	1735200	169900	455100	838500	0	843700	7100	227395	151000	0	119000	
1983	961,5	1809900	222100	463600	1096800	4012	929300	8431	291114	154700	646100	126600	
1984	1031,6	1906100	236100	475700	1389800	5045	1005800	9256	328365	162700	791800	134500	
1985	1100,5	1992600	243000	490100	1709800	5980	1072500	10005	366245	166400	1054400	146900	
1986	1168,9	2081400	266800	506400	2127900	7464	1130100	10571	403300	170900	1779600	166200	
1987	1216,9	2036000	281700	524900	2677500	8046	1202500	10716	431000	174700	1886100	174400	
	MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE												
1980-1987	10,1	6,0	12,3	3,6	30,7	261,4	10,7	12,1	19,5	6,8	688,0	9,1	
	MRD ECU	MRD FB	MIO DKR	MRD DM	MIO DRA	MRD PTA	MRD FF	MIO £	MRD LIT	MIO FL	MIO ESC	MIO £	
	GROSS DOMESTIC PRODUCT IN NATIONAL CURRENCIES AT CURRENT VALUES						PRODUIT INTERIEUR BRUT EN MONNAIES NATIONAL A PRIX COURANTS						
1980	2186,7	3434,2	373785	1478,9	1710900	15185	2769,3	9361	338743	336740	1255000	229463	
1981	2399,7	3549,9	407790	1540,9	2040800	17327	3110,6	11348	401579	352850	1468000	252991	
1982	2617,3	3859,1	466637	1597,9	2547850	19870	3567,0	13262	470484	368860	1851000	275930	
1983	2781,7	4101,7	515051	1670,9	3065770	22683	3935,0	14636	538998	378440	2290000	299622	
1984	2991,1	4381,5	565838	1745,6	3772290	25870	4277,2	16282	612112	394860	2827000	318305	
1985	3208,0	4691,5	609403	1830,3	4599910	28655	4584,3	17695	684564	411890	3441000	346438	
1986	3510,0	5011,1	667186	1936,9	5564680	31981	5015,9	18239	894362	429570	4257699	373706	
1987	3685,3	5194,6	693076	2009,9	6401098	35574	5258,1	19627	974064	434550	4992949	404492	
	MEAN TREND PER YEAR / TENDANCE ANNUELLE MOYENNE												
1980-1987	7,7	6,1	9,2	4,5	20,7	12,9	9,6	11,2	16,3	3,7	21,8	8,4	
	POPULATION						* 1000						POPULATION
1980	317 644	9 859	5 123	61 566	9 599	37 386	53 714	3 401	57 070	14 150	9 766	56 010	
1981	318 719	9 859	5 122	61 682	9 740	37 751	53 962	3 440	57 042	14 246	9 855	56 020	
1982	319 491	9 856	5 118	61 638	9 790	37 961	54 430	3 483	56 640	14 310	9 930	56 335	
1983	320 165	9 856	5 114	61 423	9 850	38 173	54 652	3 508	56 836	14 367	10 009	56 377	
1984	319 800	9 849	5 112	61 181	9 910	38 391	54 713	3 533	56 344	14 422	10 089	56 256	
1985	321 679	9 858	5 114	61 024	9 935	38 602	55 172	3 540	57 127	14 491	10 157	56 659	
1986	322 775	9 862	5 121	61 066	9 964	38 668	55 394	3 541	57 246	14 572	10 208	56 763	
1987	323 659	9 870	5 127	61 170	9 990	38 832	55 630	3 543	57 345	14 600	10 250	56 930	

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- 2 Economía y finanzas (violeta)
- 3 Población y condiciones sociales (amarillo)
- 4 Energía e industria (azul claro)
- 5 Agricultura, silvicultura y pesca (verde)
- 6 Comercio exterior (rojo)
- 7 Servicios y transportes (naranja)
- 8 Medio ambiente (turquesa)
- 9 Diversos (marrón)

SERIE

- A Anuarios
- B Coyuntura
- C Cuentas, encuestas y estadísticas
- D Estudios y análisis
- E Métodos
- F Estadísticas rápidas

GR **Ταξινόμηση των δημοσιεύσεων της Eurostat****ΘΕΜΑ**

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- 5 Landbrug, skovbrug og fiskeri (grøn)
- 6 Udenrigshandel (rod)
- 7 Tjenesteydelser og transport (orange)
- 8 Miljø (turkis)
- 9 Diverse statistikker (brun)

SERIE

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- B Konjunkturoversigter
- C Regnskaber, tællinger og statistikker
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EN **Classification of Eurostat publications****THEME**

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- 3 Population and social conditions (yellow)
- 4 Energy and industry (blue)
- 5 Agriculture, forestry and fisheries (green)
- 6 Foreign trade (red)
- 7 Services and transport (orange)
- 8 Environment (turquoise)
- 9 Miscellaneous (brown)

SERIES

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- 5 Landbouw, bosbouw en visserij (groen)
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- B Conjunctuur
- C Rekeningen, enquêtes en statistieken
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- E Methoden
- F Spoedberichten

DE **Gliederung der Veröffentlichungen des Eurostat****THEMENKREIS**

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- 3 Bevölkerung und soziale Bedingungen (Gelb)
- 4 Energie und Industrie (Blau)
- 5 Land- und Forstwirtschaft, Fischerei (Grün)
- 6 Außenhandel (Rot)
- 7 Dienstleistungen und Verkehr (Orange)
- 8 Umwelt (Türkis)
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REIHE

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FR **Classification des publications de l'Eurostat****THÈME**

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- 4 Énergie et industrie (bleu)
- 5 Agriculture, sylviculture et pêche (vert)
- 6 Commerce extérieur (rouge)
- 7 Services et transports (orange)
- 8 Environnement (turquoise)
- 9 Divers (brun)

SÉRIE

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- 5 Agricultura, silvicultura e pesca (verde)
- 6 Comércio externo (vermelho)
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- 8 Ambiente (turquesa)
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