



General information

Cooperation with third countries and international organizations in the field of research and technological development



Research and technological development (1994-1998)

Cooperation with third countries and international organizations in the field of research and technological development

Fourth framework programme research and development (1994–1998)

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Cooperation with third countries and international organizations in the field of research and technological development

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I) International scientific cooperation without frontiers

European RTD in the world in figures

A potential leading force

Number of researchers

Western Europe	700 000
USA	950 000
Japan	520 000
China	400 000
India	100 000

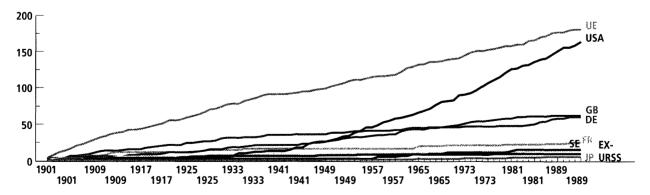
High performance standards

- The internationalization of research

 a spontaneous trend fueled by
 multiple factors:
- the increasing pace of technological progress and the establishment of new research sites all over the world;
- the emergence or aggravation of global problems, particularly in fields such as food supply, the environment and health:
- the rising cost of research, which dictates sharing the burden and risks (energy, space, etc.);
- the will to gain access to new markets with the aid of cooperation, in the context of worldwide liberalization of trade: World Trade Organization (WTO), Southern Cone Common Market (MERCOSUR), North American Free Trade Association (NAFTA), etc.;

- the advent of the information society, which makes it easier to exchange ideas.
- 2) International cooperation, a policy firmly enshrined in the EU Treaty:
 - Originally European research was limited to selected sectors (e.g. energy) and to a few chosen (particularly European) partners:
- in the mid-'80s it was turned into a fully fledged Community policy (Title XV of the EU Treaty);
- with an explicitly international dimension, as the Community was given the task of "promotion of cooperation in the field of Community research, technological development and demonstration with third countries and international organizations" (Article 130g(b) of the Treaty).

Distribution of Nobel prizes (1)

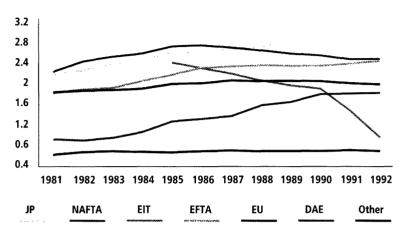


Distribution of Nobel prizes awarded by country from 1901 to 1993 in the three scientific disciplines (chemistry, physics and medicine): cumulative total

⁽¹⁾ Source: The European report on science and technology indicators 1994.

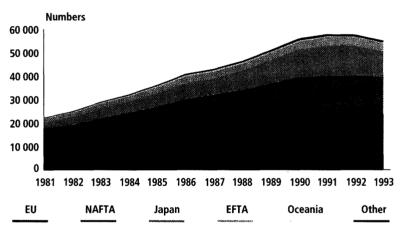
A challenge to meet: the stepping-up of RDT in non-EU countries

Intensity of RTD (1)



Trends in intensity of RTD by group of countries (R&D as a percentage of GDP)

Patenting (2)



Patenting in Europe by group of countries (1981-93)

Industrial specialization (3)

Index of industrial specialization for high-, medium- and low-tech industries

OECD=100	Ja	pan	U	SA	European Community			
	1970	1992	1970	1992	1970	1992		
High technology	124	144	169	161	86	82		
Medium technology	78	114	110	90	103	100		
Low technology	113	46	67	74	103	113		

Source: OECD, STAN database

An opportunity to seize: international cooperation in RTD

(1) Source: See previous page

(°) Source: Green Paper on Innovation COM(95)688, 10.12.1995.

3) International cooperation - a key instrument

...at the core of the Fourth Framework Programme of EU activities in the field of RTD (1994 to 1998)

Fourth framework programme (1994-1998)

Amounts and breakdown

First activity (research, technological development and demonstration programmes) 11381

Second activity (cooperation with third countries and international organizations)

Third activity (dissemination and optimization of results) 352

575

Fourth activity (stimulation of the training and mobility of researchers) 792

Maximum overall amount 13100 Mio. ECU

... at the service of EU strategy as a whole

The objective is:

- to promote a research policy giving greater added value, based on the principles of "mutual interest" and "subsidiarity". This strengthening of the EU's scientific and technological bases should also make European industry more competitive.
- to help to implement other Union policies:

Sectoral policies:

- e.g. Environment
 - Health
 - Education/training
 - Transport
 - Energy
 - Agriculture

General policies:

- e.g. Preparation of the accession of the associated Central European countries
 - Development aid
 - The EU's external relations, in the broadest sense

II. International cooperation: The dual dimension enshrined in the Fourth Framework RTD Programme (1994 to 1998)

There are two principal instruments:

- the introduction of a specific RTD programme on "cooperation with third countries and international organizations" (second activity);
- the recognition of an international dimension in the other specific RTD programmes in the Fourth Framework Programme (first, third and fourth activities).

A) The specific programme on "Cooperation with third countries and international organizations" (INCO)

The Fourth Framework Programme is the first to include a specific programme of this type (¹). The structure of this 575 million ECU programme reflects the objectives of this cooperation which has been divided into four principal areas of activity depending on the groups of countries and organizations concerned.

Financial resources

Area A1

Cooperation with other fora for European scientific and technological cooperation (COST, EUREKA, international RTD organizations)

ECU 49 million

Area A2

Cooperation with the countries of Central and Eastern Europe and

the New Independent States of the former Soviet Union

ECU 247 million

Area B

Cooperation with non-European industrialized countries

ECU 32million

Area C

Cooperation with developing countries

ECU 247 million

^{(&#}x27;) The previous Framework Programmes had only a "Science and Technology for Development" programme

Area 1: "Other fora for European cooperation"

Objectives

The aim is, in particular, to coordinate the parties' activities in the fields concerned. Three aspects are covered:

- Collaboration with COST, EUREKA and international organizations
 - COST (European cooperation in the field of scientific and technical research).
 - Since 1971 the Commission has been providing the support needed to develop and expand the activities of COST, a mechanism set up to coordinate activities financed at national level.
 - EUREKA. This programme, set up at the Hanover Conference in 1985, brings together 24 countries and the Commission with a view to making Europe more competitive in advanced technologies. EUREKA is closer to the market than the EU Framework Programme. In 1995 it consisted of almost 720 projects costing ECU 10.348 billion in fields as diverse as medicine, energy, robotics and transport. A further 242 projects have been completed since EUREKA started.

Fuller exchanges of information will improve the transfer of results from the Fourth Framework Programme to EUREKA (and vice versa) and ensure that they complement each other more effectively. with a view to improving the practical spin-offs of Community RTD. At the same

time, pre-competitive work on EUREKA projects can be carried out in the Fourth Framework Programme.

- International organizations

Closer ties are being established with European bodies such as the European Organization for Nuclear Research (CERN), the European Molecular Biology Laboratory (EMBL), the European Space Agency (ESA), etc. Closer coordination between the Member States is also being secured within international organizations such as the United Nations Organization (UNO), the World Health Organization (WHO), the Organization for Economic Cooperation and Development (OECD), etc.

– European Economic Area (EEA)

By virtue of an amendment to the Agreement on the European Economic Area (EEA), Iceland, Liechtenstein and Norway can participate in all the specific programmes under the Fourth Framework Programme. (A separate scientific and technological cooperation agreement is being prepared with Switzerland, which rejected the EEA Agreement).

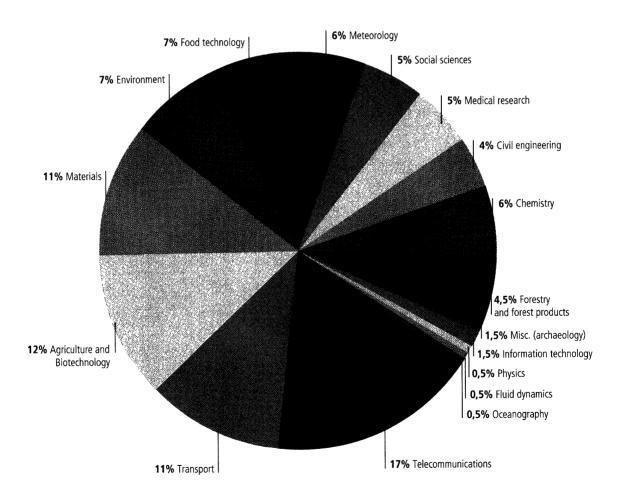
Overview of COST

COST brings together 25 European countries plus the European Commission. Its activities have grown rapidly, from 7 projects in 1971 to 129 in May 1996 covering 15 different fields:



Breakdown of Cost projects by field





Total 100% (129 projects)

Area 2:

Cooperation with the countries of Central and Eastern Europe and with the New Independent States of the former Soviet Union

Objectives

 to safeguard the scientific and technological potential in these countries:

The objective is to encourage the best researchers from these countries to continue their research activities, at a time when the RTD systems of the Central and Eastern European countries and the New Independent States are being restructured with EU aid. This would imply redirecting skills towards restoring production systems and improving their compatriots' quality of life.

 to help solve major social, economic and environment problems in these countries:

Priority is being given to research on subjects such as pollution control.

- to set up cooperation in areas of RTD where these countries are in the forefront at world level: physics, advanced materials, space research, etc.
- to strengthen the links with the associated Central and Eastern Europe countries, in preparation for accession to the EU.

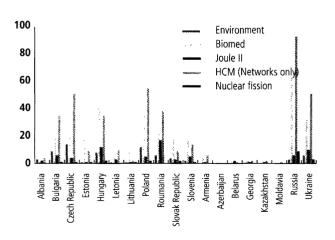
A few figures about the cooperation with the Central and Eastern European countries and the New Independent States

A wide variety of large-scale schemes (grants, support for science networks, joint ventures, etc.) have been launched to foster scientific cooperation with the European countries in transition. These have covered diverse scientific fields, particularly in the PECO and COPERNICUS programmes which started in 1992:

Participation in Community programmes (PECO) in 1994

ECU 12,9 million

Number of participants in eligible projects Breakdown by programme and by country

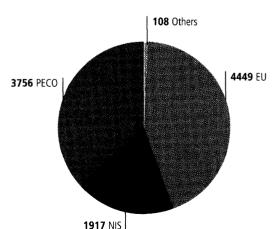


COPERNICUS programmes in 1996

ECU 32 million

Breakdown of applications

Total number of participants: 10230 For research proposal covering 12 fields (environment, health, information technologies, materials, etc.)



 INTAS (International Association for the Promotion of Cooperation with Scientists from the New Independent States of the former Soviet Union), an instrument for implementing INCO, in turn covers joint research projects involving teams of researchers from these countries.

The current INTAS members are the European Community, the 15 European Union Member States, Switzerland and Norway. The beneficiaries are Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgystan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

By the start of 1996, INTAS had given financial support totalling ECU 46 million to 1 000 or so joint research projects covering not only natural sciences and mathematics but also economic sciences and humanities. The number of partners currently involved (around 5 000 research institutes and some 12 000 scientists) from the INTAS member states and the New Independent States gives a clear idea of the scale of the scientific collaboration achieved.

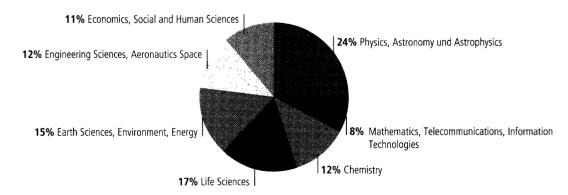
 ISTC (the International Science and Technology Centre), set up by an agreement signed between the Community, USA, Japan and the Russian Federation in 1994, is concerned with the parallel task of helping military researchers from the former Soviet Union to switch to civil activities.

This centre, supported by the TACIS (Technical Assistance for the Commonwealth of Independent States) programme also receives support from the INCO programme for project evaluation and monitoring.

In all, after two years in operation, over 200 projects have received funding exceeding ECU 65 million, shared between more than 11 000 scientists and engineers, 3 000 of whom were part of the "hard core" in the armaments industry.

The ISTC's projects cover a vast field, ranging from energy, for example peaceful uses of plutonium or the dismantling of nuclear reactors, to the environment, with the development of precision instruments for detecting pollutants or earthquakes, aeronautics, space research, health, etc. These projects are also attracting more and more partners from European industry and research institutes.

Breakdown of INTAS supported projects per scientific field



Area 3: Cooperation with non-European industrialized countries

Objectives

Europe has a great deal to gain from scientific and technological cooperation with non-European industrialized countries (identification of research topics of the future, participation in projects of excellence, access to sources of information, know-how, equipment and markets, etc.).

But at the same time relations with these countries cannot be divorced from the context of economic competition between industrialized nations. Consequently, the fields of cooperation must be defined clearly to fit in fully with the "mutual interest" principle. Cooperation of this type, with no direct Community funding, must help to attain the following objectives:

- policy dialogue with the European Union's partners (OECD and the G7 Group of the seven most industrialized nations);
- development of the RTD potential in the Community, by means of access to research and development activities and results from non-EU countries;
- tailoring the broad lines of European RTD to potential international markets;

- concertation and implementation of megascience-projects;
- participation in international programmes (for example, on intelligent manufacturing systems or the human science frontier programme to obtain a fuller knowledge of brain and biological functions);
- development of exchanges (for example, with Japan and Korea in the form of a grant system allowing young scientists from Europe to go to universities or industrial laboratories in those countries).

To attain these objectives, scientific cooperation agreements have been signed between the EU and non-EU countries. (For example, an agreement with Canada covering agriculture, fisheries and non-nuclear energy and another with Australia covering marine sciences and technologies and biotechnology in particular). These agreements open up access to selected RTD programmes under the Fourth Framework Programme to industrialized countries. The agreement with Israel will allow that country to be associated fully with the activities of the Fourth Framework Programme.

The ITER thermonuclear reactor: an example of worldwide collaboration

Within Europe, international collaboration on thermonuclear fusion is long established, spearheaded by the European Community's JET (Joint European Torus) project in Culham (England). Today, the high costs and long lead times for fusion research have given birth to an approach putting the emphasis on collaboration and involving all the world leaders in this field, namely the European Union, the USA, Japan and the Russian Federation, under the auspices of the International Atomic Energy Agency. The ultimate objective of the ITER project is to build an experimental reactor, expected to cost at least ECU 4.8 billion. At the moment the project is at the design stage; ECU 800 million has been shared between three sites - in Germany, Japan and the USA. The site of the reactor has yet to be decided.

Research grant programmes for Japan

Breakdown of the fields of work of the 157 Community researchers given Community grants to go to Japan between 1986 and 1994:

Life sciences	44
Maths, Physics, Chemistry	32
Inf./Telecomm. techn.	27
Ind./Materials technologies	26
Environment	13
Nuclear fusion	6
Others	9

In 1995 the EU awarded grants to 44 other scientists. And Japan in turn has awarded grants for more than 140 visiting European researchers since 1988.

In all, these programmes have enabled around 350 European scientists to spend between 6 and 24 months getting to know the scientific community in Japan.

Area 4:

Cooperation with developing countries

Objectives

- to promote the high-quality research required for development and economic cooperation;
- to help to sustain and improve RTD capacity, including human resources, in developing countries;
- to help to retain scientific know-how in Europe in fields of mutual interest and relevant to the problems facing developing countries;
- to take account of the Union's political obligations and of the recommendations of international fora such as the Rio Conference on research in developing countries with a view to sustainable development.

Fields

Three key sectors reflecting developing countries' major concerns have been identified:

 management of renewable natural resources (forests, oceans, water, energy, etc.),

- improvement of agricultural and agro-industrial production (livestock farming, agriculture, production, storage and marketing system, etc.),
- public health (control of prevalent diseases, vaccines, health care systems, etc.).

A fourth field covers topics of mutual interest defined jointly on a case by case basis (information and communication technologies, non-nuclear energy, industrial technologies, advanced materials, etc.).

Within each of these priority areas, activities will be targeted:

- based on dialogue between the developing countries and the Commission;
- with a view to ensuring a regional approach.

Two illustrations of the interest shown by the EU in the developing countries' concerns in the research field

RDT dimension of the Euro-Mediterranean partnership

At the Barcelona Conference on 27 and 28 November 1995, the Fifteen plus eleven Mediterranean countries adopted a solemn declaration calling for a comprehensive Euro-Mediterranean partnership.

Science and technology was one of the key chapters in the work programme defined at that time.

European initiative on agricultural research for development

This scheme brings together 18 partners (the 15 Member States plus Switzerland, Norway and the European Commission, which provides the executive secretariat) with a view to voluntary coordination of research activities conducted in cooperation with developing countries on agriculture and renewable natural resources, primarily by means of exchanges of information, exploratory studies, etc.

Overview of the results of the 1995 INCO-DC call for proposals

(Scientific and technological cooperation with developing countries)

This call for proposals, published on 15 March 1995 with a total budget of around ECU 65 million, was divided into two parts focusing on separate topics:

the first part, which closed in June 1995, was targeted on vaccines for human beings and on animal health. It attracted 77 proposals, 26 of which were selected, involving 117 participants not only from the EU and the associated countries but also from the Mediterranean region, Africa, Latin America and Asia.

The research covered various illnesses, such as diphtheria, tetanus and malaria (which, alone, threatens over 250 million lives and kills at least 1 million victims every year).

 the second part of the 1995 INCO-DC call for proposals, which closed in September 1995, addressed the same potential partners, but this part of the call aimed at helping to solve different sorts of problems.

In addition to covering health issues once again, this call also extended to management of natural resources, sustainable improvements in agricultural production (over 3 billion people in the world suffer from chronic malnutrition), and to information and communication technologies.

More than 1 100 proposals were received, of which 825 were eligible. The 144 proposals finally selected each involve an average of six participants.

Projects selected following the 1995 INCO-DC call for proposals

Number of projects per field

Field	Closing date: June	Closing date: September	Total
Natural resources	-	34	34
Agriculture	8	27	35
Health	18	39	57
Information and communication technologies	-	18	18
Total			144

Cooperation with third countries and international organizations: an integral part of the entire Fourth Framework Programme

Non-EU countries and international organizations may participate in EU RTD programmes other than INCO,

on terms which vary from one country and programme to another (see below).

Other programmes in the fourth framework programme open to international cooperation

	Co	ompl	etely	ope	n						Pa	rtially	oper)					
Programmes	Communication technologies	Information technologies	Measurements/Testing	Environment/Climate	Marine sciences and technologies	Biotechnology (¹)	Biomedicine/Health (²)	Non-nuclear Energy (Research)	Transport	Targeted socio-economic research (³)	Telematics	Industrial and material technologies	Biotechnology (other)	Biomedicine/Health (other)	Agriculture/Fisheries	Non-nuclear energy (Demonstration)	Targeted socio-economic research (other) (3)	Dissemination	Training/Mobility (4)
Participants												***************************************				****		***************************************	
European countries (5)		Yes									Yes								
Non-European countries (6)		Yes									No								

^{(&#}x27;) Biotechnology: "pre-normative research", "biodiversity" and "social acceptance" completely open.

^{(&#}x27;) Biomedicine and health: "brain research", "diseases with major socio-economic impact", "human genome", "public health research" and "biomedical ethics" completely open.

^(*) Targeted socio-economic research: "evaluation of science and technology policy options" completely open.

^{(4) &}quot;Training through research" open only to countries associated with the Fourth Framework Programme.

⁽a) Includes EEA/EFTA countries (Iceland, Liechtenstein and Norway) plus Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Cyprus, Estonia, Georgia, Hungary, Latvia, Lithuania, Malta, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Switzerland, Turkey and Ukraine. Apart from Slovenia, the other countries which were formerly part of Yugoslavia have no access to the research programmes at the moment.

^(*) The situation varies as regards opening of the specific programmes under the Fourth Framework Programme to non-European third countries (see Article 8 of each specific programme).

Some countries have greater access to certain fields by virtue of their reciprocal access agreements with the EU, as in the case of Australia and Canada (an agreement with South Africa is being prepared).

By virtue of its association agreement with the Fourth Framework Programme Israel has access to all the programmes on the same footing as EEA countries.

III. The specific programmes under the framework programme for the European atomic energy community

Apart from the activities under the Fourth Framework Programme, the European Union is also active in the nuclear field, particularly under the Euratom Treaty.

In this context, one particularly noteworthy point is that the "Controlled thermonuclear fusion" and "Nuclear fission safety" programmes are open, without funding from the Community, to other European countries, including EEA/EFTA countries even though they are not covered by the EEA

Agreement. Switzerland is already associated with the fusion programme.

The "Radiological impact on man and the environment" and "Mastering events of the past" sections of the "Nuclear fission safety" programme are also open to non-European countries.

The association agreement with Israel does not cover the nuclear programmes.

Action by the European Commission concerning Chernobyl

To continue the international scientific collaboration started after the Chernobyl accident, an agreement on this subject was concluded in 1992 between the European Commission and the three States most directly affected: Belarus, the Russian Federation and Ukraine.

This agreement, with a total budget of ECU 35 million, has produced three main lines of action covering, in particular:

- measurement of radioactive contamination, understanding of the mechanisms for transfer of contamination to man and animals and decontamination strategies;
- evaluation of the impact of radioactivity on health and potential treatments (for example, for thyroid cancer in children);
- establishment of on-site decision-making aids for use in the event of an emergency or accident.

These four years' collaboration have produced significant progress in the various fields, not only in the interest of the populations already affected but also in order to be prepared for any further accident.

IV. General conditions for participation

Who may participate?

• Which partners?

Depending on the individual case, the partners may be:

- "legal entities" from non-EU countries (i.e. individuals, companies, research centres, universities and other entities);
- international organizations.

• Which countries?

The EU's policy is to open up broad access to international RTD cooperation (see previous page).

At least how many partners?

A distinction must be drawn between research projects of the second activity in the Framework Programme (INCO) and projects of the first, third and fourth activities.

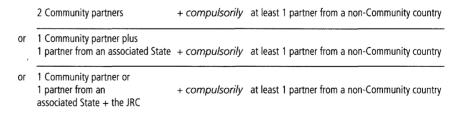
1) First, third and fourth activities:

In this case, the partnership must take one of the following configurations:

	2 Community partners	+ optionally	1 or more partners from a non-Community country
or	1 Community partner plus 1 partner from an associated State	+ optionally	1 or more partners from a non-Community country
or	1 Community partner or 1 partner from an associated State + the JRC	+ optionally	1 or more partners from a non-Community country

2) Second activity (INCO):

In this case, the partnership must take one of the following configurations:



Generally, projects involving more than the minimum number of partners specified are treated more favourably.

General principles concerning funding for non-EU countries

Associated countries (in the EEA or with a bilateral agreement such as Israel):

These countries contribute to the Community's research budget. Participants from these countries are therefore eligible for a financial contribution, like partners established in the Community.

- Non-associated non-EU countries: a distinction must be drawn between:
- Second activity (INCO):

The programme "Cooperation with third countries and international organizations" (INCO) provides a means of funding of research projects on the second activity for Central European countries, the New Independent States of the former Soviet Union and developing countries.

No such funding from INCO for projects on the second activity is allowed for participants from other non-EU countries.

• First, third and fourth activities:

Participants from non-associated non-EU countries are not entitled to any contribution from the specific programmes on the first, third and fourth activities (the funding must come from the country concerned or from other Community instruments).

But where in the interest of the Community, limited funds are available in the INCO programme to fund participation by Central and Eastern European countries, the New Independent States and developing countries in projects of this type.

What are the rules for participation?

Participation can take four forms:

- Shared-cost action: Normally Community funding will not exceed 50% of the total research costs. It may exceed 50% in the case of cooperation with the Central and Eastern European countries, the New Independent States and developing countries.
- Concerted action: This consists of coordination of RTD projects already funded by the partners, for example in the form of concertation networks.
- Specific measures under the
 "Cooperation with third countries
 and international organizations"
 (INCO) programme: part of the
 budget for the programme can be
 used to support Community
 participation in the exploratory
 phase of selected joint projects
 with Central and Eastern European
 countries, the New Independent
 States and developing countries.
- Accompanying measures: These include studies, conferences, seminars, publications, etc.

For full details of the openings available for participation and funding, consult the information packs published by the Commission with the calls for proposals.

• For which types of project?

To qualify for selection, projects must meet the basic conditions set out below:

Selection criteria

Eligibility criteria:

- be in line with the objectives of the programme;
- offer transnational, multipartner cooperation.

General criteria:

- innovatory nature of the proposal;
- generation of synergy between categories of participant, including small and medium enterprises (SME's);

- cost-effectiveness;
- participants' ability to make an effective contribution to international research activities:
- prospects for effective dissemination of the research results, including by small businesses.

Specific criteria laid down in the programme.

How to participate and when?

Projects must be submitted to the Commission in accordance with the conditions laid down in the regular calls to submit proposals. These are publicized in the following ways:

Calls for proposals

Publications	Official Journal (C series)Cordis, address: http://www.cordis.lu/
Contents	 Reference of the decision on the programme Summary of the work programme Financial data Minimum requirements Selection criteria Procedures Deadlines

Forthcoming calls for proposals

	Publication date	Closing date for receipt of proposals
- INCO-DC	15.3.1996 15.3.1997	12.9.1996 15.9.1997
- INCO-COPERNICUS:	18.4.1997	10.10.1997
- Grants for Japan/Korea	15.2.1995	13.1997/1.3.1998

V. Examples of international cooperation projects

In the AVICENNE programme involving the 12 non-EU Mediterranean countries, a project on water management, health and renewable resources is attempting to combine the pollutants in industrial waste waters with locally available products in order to develop a safe disposal process. Researchers from Cyprus, Egypt, Greece and the United Kingdom are involved.

A medical research project with Venezuela is attempting to develop a more effective treatment for thrombosis by analysing the molecular structure of the saliva of a species of Latin American bat containing a protein known as "draculin", which delays coagulation of blood for hours. Dutch, French and Venezuelan pharmacologists are working together to isolate the protein.

The SECIM project on computer-integrated manufacturing will help joint ventures which find it difficult to apply certain advanced technologies in China. Technical demonstration projects and promotional campaigns are planned, including training. The participants include the European automobile industry and European electronics suppliers together with Chinese institutes of technology, joint ventures in the automobile industry and textiles firms.

After two decades of drought in the Sahel countries, a research project is being conducted on adaptation of local food crops to aridity and on acclimatization of non-indigenous plants (such as Latin American beans) to improve the staple food supply in the region. This has brought together researchers from various African countries, from the Centre for regional studies on improvement and adaptation to drought, Brazil, Belgium, France and Portugal.

The multilateral programme on intelligent manufacturing systems (IMS) brings together participants from the EU, EFTA, Japan, USA, Canada and Australia. Following a feasibility study, the IMS programme is targeting on defining joint research projects on production technologies covering problems relating to the complete life-cycle of the product or more specific planning and design tools.

VI. Prospects for international cooperation on RDT

Since the Framework Programme was drafted in the early 1990s, there have been rapid, far-reaching changes in international competitiveness and in the technological challenges. In 1995 the EU responded by setting up research-industry Task Forces within the Commission. Alongside them, preparations for the Fifth Framework Programme are starting.

A) The TASK FORCES: closer synergy between industry and research, targeted on forwardlooking priorities

These Task Forces were set up within the Commission to ensure better targeting of priorities, in collaboration with industry and users. They are based on the specific programmes in progress, with a view to closer coordination of the resources in order to achieve the "critical mass".

They focus on a limited number of topics: "multimedia educational software", "the car of tomorrow", "intermodal transport", "maritime systems of the future", "newgeneration aircraft", "trains and railway systems of the future", "environment - water" and "vaccines and viral diseases". Full use will have to be made of international cooperation in the RTD field in order to attain the objectives set in these various fields.

B) Preparations for the Fifth Framework Programme

In preparation for the new Framework Programme, the Commission submitted to the Council a communication entitled "Perspectives for international cooperation in research and technological development".

The initial priorities stated are:

- to strengthen the external dimension of European Union RTD policy, to take account of the globalization of international scientific and economic relations:
- to promote cooperation on RTD with the Central and Eastern European countries in preparation for the accession of the associated countries and with the non-EU Mediterranean countries, making greater use for research purposes of the resources available from other European programmes (PHARE, MEDA, etc.);
- to promote the EU's external relations with the aid of cooperation on RTD on specific projects (for example, with emerging industrialized countries such as China, India and Brazil);
- to step up RTD to promote sustainable economic growth in developing countries;
- to improve the dialogue between research and industry.

The stakes are high: the European Union's position on the world science and technology scene in the 21st century.

VII. Where can you find out more?

1. Sources of general information

On paper

Various documents or publications are available from the Information and Communication Unit of DG XII (Fax: + 32-2-295-82-20).

These include:

- The Blue Guide to the Community research programmes;
- The Fourth Framework Programme;
- Research and Technology: the Fourth Framework Programme;
- "RTD Info", a newsletter available from DG XII (see above for fax number).

On computer

Information on the Fourth Framework Programme is available on Europa, the Commission's server accessible via the World Wide Web (address: http://europa.eu.int/): documents, calls for proposal, persons to contact, etc.

N.B.: The CORDIS service also gives access to several databases on Community research, giving details of the programmes, contacts, projects and publications. For further information, contact the "RTD Help Desk" in DG XIII (Telecommunications, Information Market and Exploitation of Research. Fax: + 352-4301-32084).

For all general information

on the Fourth Framework Programme, also contact DG XII's Information and Communication Unit:

Telephone: + 32.2.295.69.97 (Secretariat of Mr O. von Schwerin)

Fax: + 32.2.295.82.20

E-Mail: info-dg 12@dg 12.cec.be

2. Sources of information specifically on the "Cooperation with third countries and international organizations" programme:

International cooperation

Other fora for European scientific & technical cooperation	Mr N. K. Newman(')	Fax: 00.32.2.296.59.76
Central and Eastern Europe and the New Independent States	Mr R. Meijer(¹)	Fax: 00.32.2.296.33.08
Non-European industrialized countries	Mr L. Bellemin(')	Fax: 00.32.2.296.98.24
Developing countries	Mr T. Hall(')	Fax: 00.32.2.296.62.52

^{(&#}x27;) European Commission, DG XII – Science, Research and Development, rue de Loi 200, B-1049 Brussels, Belgium

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