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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

COOPERATION IN SCIENCE AND TECHNOLOGY WITH THIRD COUNTRIES

## I. S&T COOPERATION : SITUATION AND INSTRUMENTS

### *The Community situation in S&T*

1. Scientific and technological cooperation with third countries has become a matter of increasing importance for and an essential part of the external relations of the Community. The topic has gained in significance not only in view of the number of possibilities of cooperation with a range of countries, but also in the context of international policy in general, involving such issues as trade relations, and new political openings on the European continent. Science and technology thus emerge with a key role in international relationships.

The increasing globalisation of the world economy, coupled with the rapid expansion of S&T and their ever-greater interdependence and multidisciplinary mean that no one country now has the required capacity to develop all the S&T needed for its economic well-being. In addition, this globalisation brings with it a requirement to ensure that individual governments do not introduce distortions, regulatory or otherwise, into the now international process of S&T development. An international policy on S&T cooperation is, thus, a requirement for developed nations.

In view of the complexity of the issues involved in S&T cooperation, it is necessary to proceed in terms of a range of possible forms of cooperation to be applied depending on the circumstances. The resulting balance, matching forms of cooperation with groups of countries or regions, provides a reference framework for the policy of S&T cooperation with third countries. In developing a policy for S&T cooperation for the Community, an essential requirement will be that it meshes in with and does not cause harm to the Community's other policies, such as agricultural or commercial.

2. The general level of science and technology in the Community is high and the results achieved compare with those in other advanced countries. Basic science has a long tradition in Europe. Technological developments have contributed to securing a significant share of world economic activities.

The need for an increased effort in S&T has led to efforts in Europe to join resources and forces in order to be more effective and competitive on the world scale. Significant progress has been achieved since these efforts have been supported by the European integration process in general, affecting sectors such as economy, trade, communication and education.

The same considerations make it increasingly desirable for the Community to play an important role in international S&T cooperation

The relative economic and technological strength of Europe offers an advantageous position for participating in international S&T cooperation in a way which ensures that technology is shared on mutually advantageous terms.

During the European unification and integration process, Community participants have gained valuable experience in the field of cooperation and therefore are ready to achieve full and balanced benefit of the cooperation with third countries. An example is the area of standardisation where the Community contribution is recognised and plays an important role internationally.

International cooperation will further strengthen the scientific and technological capabilities of the European research community. The creativity arising from the mobility of researchers and engineers may contribute to the successful application of new technologies.

With the experience in cooperating accompanied by an intensive exchange of personnel the knowledge of extra-European environments will be developed. This knowledge will contribute to increasing the competitiveness of European industry.

*The instruments of S&T cooperation*

3. With the addition of a Title VI to the third part of the EEC Treaty (Articles 130f to 130q), the Single European Act gave the Community explicit powers to carry out a common research and technological development (RTD) policy. This previously meant recourse to Article 235. The objective of this policy is to "strengthen the scientific and technological basis of European industry and to encourage it to become more competitive at international level" (Article 130f(1)). To carry out this objective, Article 130g requires the Community to promote cooperation on RTD with third countries and international organisations: this forms the second area of RTD policy action after the implementation of research programmes in cooperation with enterprises, research centres and universities in the Community. Thus, along with its recognised power in the field of RTD, the EEC has explicitly been assigned corresponding external competence.

The activities to be carried out are the subject of a multiannual programme in the form of the "Framework Programme" unanimously adopted by the Council (Article 130i).

The powers of the Community to carry out RTD activities in the course of the Framework Programme, including cooperation with third countries, are defined by its content. It is foreseen in the third Framework Programme (Article 2(2)) that its implementation could give rise, where required, to such cooperation in all six RTD activities provided for.

4. When cooperation involves binding agreements with parties which are subject to international law (e.g. for associating third countries with a Community research programme), this can only be through "agreements" within the meaning of Article 228 of the Treaty, negotiated and concluded according to the procedures of this Article (Article 130n). The Council has authorized the Commission in the specific programmes adopted under the second Framework Programme to negotiate such agreements with European or COST countries which have concluded framework agreements for S&T cooperation with the Community. For the specific programmes under the third Framework Programme, the Commission has proposed to the Council that this arrangement be adopted for all third countries for which such agreements would be necessary.

Cooperation with third countries with the aim of developing their S&T potential does not come within the EEC's limits of competence defined by the current Framework Programme. It can always be based on the Treaty's provisions used traditionally (Articles 113 and 235, or Article 238 if it is a question of a more general association with the Community rather than with Community RTD programmes).

5. Where third countries have concluded framework agreements for S&T cooperation with the Community, the specific programmes of the second Framework Programme provide for the participation of enterprises and organisations from these countries project by project in the programmes. The proposals for programmes under the third Framework Programme also have this provision without limiting it to European countries, as has generally been the case.
6. With the exception of the additional task given to it by Article 130h, the Single European Act has not affected the Commission's own powers, allowing it to perform the tasks required of it and, in particular, to exercise its right of initiative (as per the Declaration to the Minutes of the Triologue of 28.6.1982) : pilot projects, preparatory

activities (studies, enquiries, seminars). These powers extend to international cooperation aspects. When such cooperation does not require legal agreements within the meaning of Article 228, it may be the subject of working agreements or administrative arrangements with third countries or international organisations.

The powers of the Member States for carrying out their own RTD activities, including those in the same areas as the Community, remain undiminished (Article 130g, first paragraph : subsidiarity principle). They and the Commission are required to coordinate national policies and programmes (Article 130h). Such coordination will be particularly important in the context of the completion of the internal market in 1992 and may require a more structured exchange of views and information between the Commission and the Council.

The Single European Act has also not affected the EURATOM Treaty as far as nuclear research is concerned. This continues to be governed by Article 7 of this Treaty and by Articles 10 and 101 for international cooperation in this area.

#### *Cooperation agreements on specific programmes*

7. For cooperation agreements associating a third country to a Community specific programme, the Council and the Commission have agreed a three phase procedure for organising the consultation of a third country during the management of the programme (declaration to the minutes of the 20.6.1989 Council meeting). This procedure, used "in the meantime and without prejudice to a definitive solution" is difficult to reconcile with the "comitology" decision of 13.7.1987. According to this procedure, the Commission submits to the programme Committee (type I or III depending on the programme) a "draft of the measures to be taken" (Article 2, comitology decision). However, it is only after consultation of the third country through the joint association Committee that the Commission can submit a draft of the measures to be taken to the internal Committee, if such consultation is to have any meaning. If the latter is a type I Committee, the Commission is not bound by the comitology decision to accept its opinion. If it is a type III Committee, the Commission is required to adopt the measures envisaged at this stage when they are in accordance with the Committee's opinion, whereas the consultation of the joint Committee may lead it to envisage other measures.

It is thus necessary to adopt a more appropriate definitive solution :

- a a first discussion in the internal Committee on the position the Commission envisages taking on the points to be examined with the third country in the joint Committee;
- b consultation of the third country within the joint Committee with the Commission representing the Community, assisted by Member State representatives from the internal Committee as observers;
- c a submission to the internal Committee according to Article 2 of the comitology decision in order to obtain its opinion on the draft of the measures to be taken.

## II. DEVELOPMENT OF CURRENT ACTIVITIES IN BILATERAL S&T COOPERATION

8. This section concentrates on outlining the kinds of cooperation activities under way or envisaged for three broad groups of third countries: the industrialised countries; Eastern bloc countries; and other countries, including developing and newly-industrialising countries. Whilst none of these groups can be considered a homogenous whole, certain general principles in S&T relations with each group can be singled out. The history of Community S&T cooperation with the various countries mentioned in this section is, for the most part, well known and will not be repeated here.

### INDUSTRIALISED COUNTRIES

9. This group broadly covers the EFTA and other OECD countries. Opportunities for collaboration on largely equal terms and to the benefit of both sides exist, taking into account strategic, economic and S&T considerations. A balance between the requirements of cooperation and the needs of competition must be realised, since firms of these countries are in competition with those of the Community. Examples of the kinds of areas where cooperation could be mutually beneficial include "large", advanced science (e.g. biotechnology, nuclear physics) and issues of a global nature (e.g. environment). In addition, there is particular scope to develop pre-normative research aimed at defining common scientific bases for technical standards and regulations in order to facilitate the removal of barriers and the opening up of international trade.

#### *EFTA countries*

10. The Community has a well established policy of S&T cooperation with the countries forming part of EFTA, based on established ties and geographical proximity. The EFTA countries have access to certain programmes under the second Framework Programme. The form of participation selected in each case depends on the nature of the specific programme and the related Council decisions.

The full participation formula is used for programmes aiming at long term results, for programmes targeted at the solution of socio-economic problems or having large public interest implications (environment, medical research), or for programmes which aim at the reinforcement of the scientific community (SCIENCE, SPES). For programmes containing more industry-orientated objectives (such as ESPRIT, BRITE or RACE) the project-by-project formula has been applied.

EFTA countries have formally expressed their wish to be more actively involved in the Community's R&D activities. Such a request will have to be dealt with in the context of the so-called "Oslo-Brussels process", aimed at establishing a more structured partnership in the future between EC and EFTA. Negotiating directives have been proposed to the Council.

### *United States*

11. The Community has an interest in developing cooperation with the United States as the world's leading scientific and economic power. There have been recent indications from the United States of a wish to explore the possibility of cooperating with the Community in specific areas of technology. Consequently although international competition is strongly affected by the respective technological level, under certain conditions S&T cooperation has the potential to yield mutual benefits. S&T cooperation has to be implemented so that the balance of advantages is secured for all partners and so as not to be detrimental to other EC policies vis-à-vis the US. Sharing the expenses would be obligatory as a principle.

Up to now the Community's cooperation in S&T with the USA nevertheless remains limited by comparison with the level of research activity and the potential for cooperation available on both sides of the Atlantic. Moreover, cooperation is dispersed through a multiplicity of arrangements, exchanges of letters, etc.

The Commission shares with the US the objective of opening up a better structured dialogue. The kinds of areas in which such cooperation could be carried out are exemplified by those proposed during his visit to Washington in March 1990 by Vice-President Pandolfi. He suggested the establishment of a joint EC-US Task Force in the area of Science and Technology and as a first step proposed that the Community and the US should explore the following five priority areas for possible concertation and cooperation : information technologies; prenormative research in the biotechnology sector; energy and environment; large scale scientific projects (global change, the human genome, fusion, high energy physics and SSC, space stations, deep sea research stations and deep drilling on land); research and technological development with and for the countries of Eastern Europe.

These matters are at present under active consideration.

### *Japan*

12. Japan has risen to the rank of a world economic power, with a corresponding scientific and technological strength. S&T cooperation with Japan can play an important role not only from the pure S&T point of view but also in order to balance the degree of benefit gained from applying new technologies, a domain where the Japanese traditionally excel. On a longer term view, a close cooperation between Europe and Japan, resulting in a better mutual understanding and in sharing interests when applying jointly developed new technology, would contribute to opening the Japanese market further to European products, services and know-how beyond the scope of the different cooperation projects themselves. Such cooperation may also contribute to balancing the strong integration of S&T activities which can be seen between Japan and the US as well as between Japan and Asian newly industrialised economies.

Several domains have been chosen for joint activities: thermonuclear fusion, nuclear safeguards, R&D applied to environment. Other areas which might be suitable for cooperation include: non-nuclear energy, health/medical research, human genome, biotechnology, environment, robotics, new materials and information technology.

On the technological side cooperation has been less marked because of the competitive situation between the two sides. However, with the exception of problems over HDTV, a fruitful cooperation with Japan has been possible in the standardisation sector.

Recently, the Japanese side increased its effort to initiate "global S&T cooperation". After contacts on the Human Frontier Science Programme initiative on biological functions at molecular level and on brain functions, the latest proposal, the IMS (Intelligent Manufacturing Systems) initiative, has been submitted to the international research community (US, EC). Other initiatives are under preparation, such as a major international research project on telecommunications initiated by MPT (Ministry of Posts and Telecommunications) which could complement the joint standardisation effort now rapidly extending to the telecommunications sector.

*Canada, Australia, New Zealand*

13. These countries are characterised by a high level of science and technology which makes them attractive partners in a number of well selected areas. S&T cooperation may be envisaged on a basis of shared costs.

Cooperation already takes place with Canada in a wide range of areas (including energy, materials and medical research) under the 1976 Framework Agreement on commercial and economic cooperation.

The rapid development of the Community's research programmes has led Canada to officially request on 2 June 1989 (reiterated recently at the last ministerial meeting) negotiations for the conclusion of a Framework Agreement for S&T cooperation. In the current positive political context, and in the light of the scope for mutual benefit, the Commission is of the opinion that negotiations should be started with Canada along the lines proposed to the Council with respect to Australia.

Australia is searching for foreign partners to help accelerate its technological development. It looks to Europe to balance its relations with the US and Japan. Maintaining and expanding relations with Australia is also in the European interest. S&T cooperation may have an important role in such a context, especially considering the emergent role of the Pacific rim. Niches of scientific excellence exist in Australian laboratories to warrant cooperative activities and several areas of mutual interest have already been identified: telecommunications and information technologies, agriculture, biotechnology, materials and energy. To this might be added in the future: environment and remote sensing.

Australia has formally asked to enter into negotiations for a Framework Agreement for S&T Cooperation with the Community, because of scientific considerations as well as political reasons related to the desire to widen the scope of Australia's relations with the Community. In May 1989, the Commission presented a Communication to the Council including the necessary negotiating directives for a bilateral S&T Framework Agreement.

In May 1989, New Zealand proposed to the Commission that a more structured cooperation should be achieved through an exchange of letters. The Commission is of the opinion that a better organised dialogue in selected scientific areas may be beneficial to the Community.

## EASTERN BLOC COUNTRIES

14. The recent political changes in Eastern bloc countries have opened up for the Community completely new areas of possible S&T cooperation and particular challenges due to the nature of the countries concerned. The general situation in S&T can best be described as sound scientific talent which has been undervalued and underused both for training the workforce and for supplying the technological needs of industry. S&T cooperation with Eastern bloc countries can not be conceived as a simple extension of the models in use with other countries, such as EFTA. Any actions to be taken are not only exceptional in nature, but need a high degree of specificity in their objectives, means and operation.

### *Central and Eastern Europe*

15. The approach of the Community concerning cooperation and direct development is based on its responsibility to help ensure stability in the European continent. In this respect S&T cooperation is viewed as an essential means to bridge the economic gap between these countries and the Community and to contribute to the overall goal of reshaping the order and relationships among countries on the European continent as a whole.

Bilateral agreements covering trade and economic cooperation have recently been concluded or are being negotiated. These agreements include provisions on S&T cooperation. The Commission has proposed that the Community should examine the possibility of entering into closer relations with the countries of Central and Eastern Europe through association agreements. Any such strengthening of the relationship would depend on commitment to political and economic reform.

A primary aim of cooperation should be industrial revival through technology and to exploit the research results to practical use. There is a notable need to satisfy demands for consumer durables, in particular to ensure the social consensus required for the acceptance of the market economy, and to reduce the wasteful energy and material intensity of manufacturing.

Industrial revival would be impossible without a work force and management able to sustain it. Training has indeed been identified as one of the four major areas for G-24 assistance. Thus this aspect will have to be taken into account in the planning of possible actions. Basic research must also be strengthened and scientists in Eastern Europe should be given every opportunity to reintegrate fully into the international scientific community.

In elaborating its further proposals, the Commission will take due account of the views of the Council and the European Parliament and the determination of the needs of the countries considered, in particular with regard to the priorities established with the individual countries. In the Commission's view the activities to promote S&T cooperation fall into three main categories: regular scientific cooperation; particular R&D activities aimed at transferring technologies to Eastern and Central Europe; cooperation in the field of human resources. A special Communication to the Council and the European Parliament is being submitted at the same time as this Communication.

## *USSR*

16. The Soviet Union has enormous potential, both in resources and in the scientific and technological sphere. In view of its size and importance the USSR requires particular consideration and arrangements for cooperation approached in accordance with the principle of mutual advantage. The Community's relations with the USSR are distinct from its relations with Central and Eastern Europe because of its geographical position and its role on the world political scene although at this stage its economic evolution shares many characteristics with those countries.

A trade and cooperation agreement entered recently into force between the Community and the USSR. This contains a reference to scientific and technological cooperation in areas of mutual interest which can be developed in the coming years.

Cooperation in the field of nuclear fusion already exists and contacts have been recently established in order to start cooperation in the field of nuclear safety and nuclear research, environmental and medical research. Another particularly interesting sector might be deep drilling in which the USSR is already very advanced. Research in the information technology field and standardization aspects are also promising fields.

## OTHER COUNTRIES

17. This grouping is characterised by a large degree of diversity in the forms of cooperation with the Community, ranging from development aid instruments to S&T cooperation such as would be envisaged with industrialised countries.

### *Newly Industrialising Countries*

18. The Community's relationship with these countries is characterised by their need to improve S&T capabilities as their economic and technological situation improves. Meanwhile their domestic markets will develop. S&T cooperation must accordingly be balanced between development objectives and improving market access, including a balanced relationship between industrial partners in the fields selected for technological cooperation.

As far as scientific cooperation is concerned the links between these centres and EC research institutions can be strengthened without major effort and investment; unlike commercial or trading partners, who are often hindered in their relationships by private and national interests, top level scientists speak the same language, share objectives and methodologies and are acquainted with international scientific undertakings.

Technological cooperation is a more critical field because the know-how requested is often quickly exploited in selected areas to an extent that places at risk corresponding industries in the Community. A balanced form of cooperation, avoiding a mere know-how drain and with a clear reciprocal benefit, must therefore be found; this is usually difficult to define and varies significantly from country to country. However, cooperation in prenormative areas in combination with an emphasis on standardisation activities could prove to be a practicable solution. Such cooperation schemes are necessary in order to build up long-term relationships and to mark the presence of the young economies bound to play an important role in the future.

In the context of its Strategic Analysis in Science and Technology (SAST) activities a study aiming at identifying different concepts for S&T cooperation with newly industrialised countries has been launched by the Commission.

### *Mediterranean countries*

19. This region is characterised by a certain diversity among the countries concerned as well as the level of economic development and the S&T capacity. Certain Mediterranean countries in the North and Centre are immediately adjacent to the Community, with which they have close links. Those in the Southern area are confronted with development problems on a greater scale for which special measures are required. Nevertheless, in the context of the Renewed Mediterranean Policy currently under discussion on the basis of a recent Commission proposal, a global S&T cooperation policy for the Mediterranean region should be defined as geographical, cultural, historical and economic links between the Mediterranean countries justify considering this region as an entity. In addition, the Commission has recently made specific proposals on S&T cooperation with Turkey.

The various approaches, the different instruments used and the extremely different results obtained, are reflected in the variety of options found in the bilateral cooperation agreements that the EC has signed with the different countries of the region. Therefore, the need for a more coherent EC-Mediterranean scientific policy arises.

### *Developing countries*

20. Community activities to help these countries are established in a wide range of cooperation and development agreements.

The objectives in the area of S&T cooperation, in coherence with overall EC policy vis-à-vis these countries, are aimed at fostering sustainable development. In several areas of cooperation, including rural development, health, education and training, environment or energy, S&T cooperation contributes to the promotion of such sustainable development.

Several developing countries have, by virtue of demographic and economic importance, achieved a position which gives them substantial international weight, either in terms of international leadership or of potential markets. It consequently behoves the Community, in the area of cooperation, to reinforce their position and interests by contributing to integrating them more fully into the various European policies in such areas as commercial relations or the definition of norms and standards.

As far as Asian and Latin American countries are concerned, the Commission has transmitted to the Council its proposals for an overall policy, including S&T cooperation.

As far as African, Caribbean and Pacific countries are concerned, the Community and the Commission signed the Fourth Lomé Convention in December 1989. This gives the overall framework for cooperation activities for these countries. This framework gives particular weight to S&T aspects. In accordance with their specific problems, particular attention is given to research, both scientific and technological, in the area of rural development. More generally, S&T cooperation under the Lomé Convention aims at the reinforcement of national research capabilities, know-how and mastering of technologies.

The Commission has more specific instruments at its disposal for contributing to the promotion of scientific and technological cooperation with developing countries, including the "Science and Technology for Development" (STD) programme, specifically oriented towards North/South collaboration on agriculture and health, the "International Scientific Cooperation" (ISC) initiative, etc.

From an overall point of view, the reinforcement of S&T cooperation could and should play an important role in relations between the EC and developing countries. In the complex interplay of alliances between countries supplying technology and those building a dynamic economy, the Community of 1993 appears an attractive partner.

In this particular area, the challenge to the Community will be to show that it is capable of responding to this demand and adopting a strategy appropriate to the characteristics of this demand from developing countries.

### III. PARTICIPATION IN MULTILATERAL ACTIONS

21. There is substantial Community experience in a wide range of research activities. In addition, multilateral initiatives organised by the main international organisations (such as the IEA and the IAEA) have been gaining in importance.

Though not always initiated by the Community, these activities have always been positively taken into account. The Community has actively participated and envisages to continue to do so.

#### *COST*

22. COST includes 19 European countries: the 12 Community countries, 5 EFTA countries (Austria, Switzerland, Norway, Sweden, Finland), Yugoslavia and Turkey.

In its June 1989 Resolution, the Council invited the Commission to pursue the examination of improvements to the functioning of COST, in particular the administration and management of projects; the Commission intends to give increased financial aid from 1991, to the coordination and support granted to COST actions of category B. This would allow the correlative discharge of certain specific Community programmes on which the costs of secretariat of certain projects have been charged until now. A contribution from COST third countries would also be requested. In spite of the fact that, by definition, they are not connected with specific Community research programmes, the Commission will endeavour to include COST category B projects within the Framework Programme.

More recently, the COST countries proposed to widen the COST framework to those Central and Eastern European countries undergoing reforms based on the founding principles of democracy, pluralism and the rule of law. The Commission supports this idea.

#### *Eureka*

23. Eureka is a framework of cooperation in advanced technologies which aims at increasing the productivity and competitiveness of European industry in the world market. Characterized by a non-centralized and bottom up approach (the absence of pre-defined thematic subjects), Eureka is intended also as an instrument which is complementary to the existing European technological cooperation and its further development.

The Commission is a full Eureka member and participates in various Eureka projects. The links between Eureka and the Third Framework Programme will be intensified in the future, namely within the JESSI and HDTV initiatives. The Joint Research Centre takes an active part in this cooperation between the EC and Eureka by participating in several Eureka projects as a partner with its own research capacity.

In its Third Framework Programme (1990-1994), the European Community has decided to develop relations further in areas of complementarity between its research actions and the Eureka projects which extend its strategy of research and technological developments. Coordination efforts have prevented duplication and permitted Community RTD actions which complement Eureka projects and vice versa.

*Other multilateral initiatives*

24. In the field of large scale projects (global change, the human genome, fusion, high energy physics, space stations, deep sea research stations and deep drilling on land) cooperation at multi-lateral level is useful and desirable. Such cooperation may take place on a modular basis, applicable only to interested parties. The motivation for such initiatives comes from various elements; the wish for common strategies, the need to avoid duplication of efforts, and the benefits to be derived in scientific and technological terms.

Examples of this type of cooperation are:

International Thermonuclear Experimental Reactor (ITER): a multilateral research project in the area of thermonuclear fusion involving the EC, the US, the USSR and Japan, agreed upon in February 1988 and to come to an end by December 1990.

Intelligent Manufacturing System (IMS) initiative: A Japanese initiative, still at a preliminary stage. It aims at setting up the framework for an international collaboration effort in pre-competitive R&D in the field of Advanced Manufacturing Systems. International participation, primarily of the EC and the US, is solicited by Japan.

Superconducting Supercollider (SSC): a critical but useful subject for a possible cooperation between the Community, CERN and the US in which the EC should play the role of a catalyst.

#### IV. GENERAL PRINCIPLES AND GUIDELINES FOR COMMUNITY POLICY.

25. In the run-up to 1992 and beyond, the processes of European integration demand that the Community should take a more active role in developing S&T cooperation with third countries. In this, the Community must bear a series of factors in mind.

It is possible to identify three principles of a horizontal character. These are guidelines which may be applicable independently of the forms of cooperation and of the geographical areas, as well as three criteria of a vertical nature which refer to the characteristics and geographical situations of third countries.

26. The principles of horizontal character lay down the objectives pursued by the European Community in its international S & T cooperation, as a necessary extension of its internal policies. They can be summarized as follows:

a Support to initiatives of a global nature. Science and scientific research have a major part to play in tackling what are now common problems for the world as a whole. The most evident case concerns environmental issues such as the greenhouse effect, as well as other possible climatic changes, epidemics and malnutrition. The Community has a responsibility to make its contribution, together with the Member States, in this regard.

b Support to the international scientific community. This principle is applicable generally. Among the specific possibilities it should be mentioned that one of the important new programmes of the third Framework Programme is the one dealing with Human Capital and Mobility. Such a programme contributes to scientific potential at Community level through the exchange of young researchers. This programme should not be considered as a closed or exclusive action. Appropriate ways of extending such a programme to exchanges of scientists with third countries are possible and useful. Expressions of interest along these lines have been made by European countries, EFTA and non-EFTA, as well as the United States.

c Selective cooperation activities in the field of research and technological development. In general the Community recognizes the usefulness of international cooperation aimed at increasing the level of technology on a world-wide basis to serve economic and industrial development. It is only by the development and application of technology that a modern standard of living can be achieved. However, technological development has a direct or indirect impact on international commercial competition. This must be taken into account in the Community's international S & T cooperation policy. The identification of possible activities must be guided by selective criteria. In particular, two essential prerequisites must be ensured: the full operation of market forces and mutual access to market opportunities.

27. The three principles mentioned above intersect with three guidelines applicable to Community initiatives in S & T cooperation in different regions of the world. These guidelines reflect the political aims pursued by the Community in more general terms. This means that,

a So far as the Community's European neighbours are concerned, the Framework Programme considerations must also apply. The intensity of the resulting initiatives will depend on how the implementation of the European Economic Space (EES) is realised. The EES is expected to influence significantly the scope and quality of these initiatives.

In the case of countries like those in Central and Eastern Europe, a wider factor must also be taken into account. The Community has a responsibility to help these countries in their efforts to install a greater well-being for their citizens and a more effective economy. The selection of R & D areas for assistance and cooperation must be guided by the priorities set by these countries in order to fulfil their needs to the maximum extent.

- b In the case of developed countries outside Europe, the central objectives of the Framework Programme must remain the main criteria for determining whether cooperation in a given area should be pursued. A balance of advantages must be secured in all instances.
  - c The Community's response to the needs of the developing countries in the areas of scientific and technological cooperation likewise forms part of a wider endeavour and a permanent framework designed to assist these countries. The Community's efforts will not be reduced in any way as a result of its support for the countries of Central and Eastern Europe.
28. These elements summarise the principal orientations from which the Community's policy in this area should be devised. The application of these general guidelines in individual instances will necessarily depend on the particular circumstances of the case and the country or countries concerned. Discussion of the guidelines and a general level of agreement on the principles involved will facilitate the decisions to be taken in specific cases and reinforce the input of Community policy in this area.
29. Finally, a regular (annual) discussion in the Council on the broad orientations of the Community's cooperation policy in S&T with third countries could be particularly useful.