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INTERGOVERNMENTAL NEGOTIATING COMMITTEE  
FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE  
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MATTERS RELATING TO ARRANGEMENTS FOR THE FINANCIAL MECHANISM  
IMPLEMENTATION OF ARTICLE 11 (FINANCIAL MECHANISM), PARAS. 1-4

Co-Chairmen's text and submissions received from Governments

Note by the interim secretariat

During the tenth session of the Committee, the Co-Chairmen of Working Group II were requested to reproduce in a miscellaneous document for reconsideration by the Working Group at its eleventh session, texts on which there was agreement as well as texts on which no agreement could be reached. In the present document, the texts in normal type are those on which agreement was reached at previous sessions of the Committee; the texts in italics are those on which there was no consensus; and underlining denotes areas where there appeared to be particular difficulty.

This document also contains submissions received by the interim secretariat from Colombia, Germany (on behalf of the European Community and its member States) and Italy relating to adaptation, mitigation, incremental costs, capacity building and transfer of technology. These submissions are reproduced in the original language(s) in which they were received and without formal editing. The attention of the Committee is also drawn to document A/AC.237/Misc.43 (on the adequacy of commitments) which includes some comments from delegations that also address the subject of transfer of technology.

A/AC.237/Misc.41

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CONTENTS

	<u>Page</u>
A. CO-CHAIRMEN'S TEXT . . . . .	3
B. ADAPTATION	
Germany (on behalf of the European Community and its member States) . . . . .	10
C. MITIGATION	
Germany (on behalf of the European Community and its member States) . . . . .	13
D. INCREMENTAL COSTS	
Germany (on behalf of the European Community and its member States) . . . . .	18
E. CAPACITY BUILDING	
Germany (on behalf of the European Community and its member States) . . . . .	24
F. TRANSFER OF TECHNOLOGY AND COOPERATION	
Colombia . . . . .	30
Germany (on behalf of the European Community and its member States) . . . . .	34
Italy . . . . .	41

## I. CO-CHAIRMEN'S TEXT

1. With respect to activities undertaken under Article 11, the Committee concluded that:
  - (a) Within the framework of the financial mechanism:
    - (i) The operating entity or entities should, in all funding decisions related to the financial mechanism, take into account Article 4.1, 4.7, 4.8, 4.9 and 4.10 of the Convention. In particular, in order to take full account of the specific needs and special situations of the least developed countries, funds allocated to their projects/programmes should be on a grant basis;
    - (ii) Projects funded through the financial mechanism should be country-driven and in conformity with, and supportive of, national development priorities of each country;
    - (iii) The operating entity or entities should ensure that, with reference to activities involving transfer of technology, such technology is environmentally sound and adapted to suit local conditions;
    - (iv) As far as possible, due consideration should be given to the following aspects concerning activities undertaken under the financial mechanism. Activities should be:
      - supportive of the national development priorities which contribute to a comprehensive national response to climate change;
      - consistent with and supportive of the relevant provisions of internationally agreed programmes of action for sustainable development in line with the Rio Declaration and Agenda 21 and UNCED-related agreements;
      - sustainable and lead to wider application;
      - cost-effective;
    - (v) *The operating entity or entities should finance the formulation by developing country Parties of integrated nationally determined programmes to address climate change issues. To facilitate the formulation of these programmes, it should also finance capacity building and all other activities related to the formulation and management of, and regularly updating of these programmes, which should, as far as possible, be comprehensive [and include mitigation and adaptation measures]/[taking into account the inventory of all sources and sinks of greenhouse gases, the activities of government, industry and international agencies, and an appraisal of mitigation options including energy and transport*

efficiency, the application of environmentally safe and sound technologies, policy reforms, and changes in production methods]. [Some delegations were of the view that this paragraph should be placed under programme priorities.]

(vi) The operating entity or entities of the financial mechanism should strive to leverage other funds in support of the activities of the developing country Parties to address climate change.

(vii) In mobilizing funds, the operating entity or entities should take into full account (a) the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties as stipulated in Article 4.3; and (b) the arrangements which inter alia shall include determination in a predictable and identifiable manner of the amount of funding necessary and available for the implementation of this Convention, as provided for in Article 11.3 (d) of the Convention.

(b) With regard to activities undertaken outside the framework of the financial mechanism:

(i) Consistency should be sought and maintained between activities (including those related to funding) relevant to climate change undertaken outside the framework of the financial mechanism and the policies, programme priorities and eligibility criteria for activities as relevant, established by the COP.

(ii) Information should be sought by the interim secretariat from multilateral and regional financial institutions on activities and projects relevant to climate change which are those activities and projects undertaken outside the framework of the financial mechanism but under the provisions of the Convention including activities undertaken under Article 11.5 of the Convention.

(iii) This should not introduce new forms of conditionality.

(iv) Initial measures for promoting such consistency would include information collection and analysis. The secretariat is requested to promote the organization of a meeting bringing together multilateral and regional financial institutions in order to consider modalities for such information collection and analysis and develop proposals in that regard. In the initial phase, information would be collected with regard to sectors directly relevant to climate change, such as energy, transportation and agriculture.

2. Regarding programme priorities, the Committee concluded that :

(a) Priority should be given to the funding of agreed full costs (or agreed full incremental costs, as appropriate) incurred by developing country Parties in complying with their obligations under Article 12.1 and other relevant commitments under the Convention. In the initial period, emphasis should be placed on enabling activities undertaken by developing country Parties, such as planning, endogenous capacity building including institutional strengthening, training, research and education, that will facilitate implementation, in accordance with the Convention, of effective response measures.

(b) *In this context research and development activities in developing country Parties should be strengthened and supported through international and intergovernmental efforts. Assistance should be given for existing and, as appropriate, new research institutions and their networking in developing country Parties and for training of experts, in accordance with relevant provisions of the Convention.*

(c) *Emphasis should also be placed on improving national public awareness and education on climate change and response measures.*

(d) *The operating entity or entities should [be available to assist, if so requested] / [give priority to assisting Governments] in the implementation of the national programmes adopted by Governments in accordance with the policies, programme priorities and eligibility criteria as established by the COP.*

(e) *In the implementation of these programmes, the operating entity or entities should support activities to mitigate greenhouse gas emissions not controlled by the Montreal Protocol, consistent with the comprehensive approach contained in the Convention.*

3. The Committee took note of the paper presented by the Group of 77 and China on the format for communication of information by non-Annex I Parties and decided to take it up for discussion at the eleventh session (A/AC.237/76, para. 83).

4. With regard to eligibility criteria for countries, the Committee concluded that:

(a) Eligibility criteria will apply to countries and to activities and will be applied in accordance with Article 11.1, 11.2 and 11.3;

(b) Regarding eligibility of countries, only countries that are Parties to the Convention would be eligible to receive funding upon entry into force of the Convention. In this context, only developing country Parties would be eligible to receive funding through the financial mechanism, in accordance with Article 4.3.

5. Concerning eligibility criteria for activities, the Committee concluded that:

(a) Those activities related to obligations under Article 12.1 to communicate information for which the "agreed full costs" are to be met are eligible for funding;

(b) Measures covered by Article 4.1 are eligible for funding through the financial mechanism in accordance with Article 4.3. Such measures should be agreed between the developing country Party and the international entity or entities referred to in Article 11.1, in accordance with Article 4.3;

(c) In addition to the above, such measures would be eligible for financial support under Article 11.5.

6. Regarding adaptation, the Committee agreed on the following:

(a) Adaptation to the adverse effects of climate change, as defined by the Convention, will require short, medium and long term strategies which should be cost effective, take into account important socio-economic implications, and which should be implemented on a stage-by-stage basis in developing countries that are Parties to the Convention. In the short term, the following stage is envisaged:

(i) Stage I: Planning, which includes studies of possible impacts of climate change to identify particularly vulnerable countries or regions and policy options for adaptation, and appropriate capacity building.

(b) In the medium and long term, the following stages are envisaged for the particularly vulnerable countries or regions identified in Stage I:

(i) Stage II: Measures, including further capacity building, which may be taken to prepare for adaptation, as envisaged by Article 4.1(e).

(ii) Stage III: Measures to facilitate adequate adaptation, including insurance, and other adaptation measures as envisaged by Articles 4.1(b) and 4.4.

(c) Based on the outputs of the Stage I studies, as well as other relevant scientific and technical studies, such as those of the IPCC, and any emerging evidence of the adverse effects of climate change, the COP may decide that it has become necessary to implement the measures and activities envisaged in Stages II and III, consistent with the conclusions of the Committee and the Convention.

(d) Funding for the implementation of such adaptation measures and activities would be provided as follows:

- (i) For Stage I, the COP at its first session, shall entrust to the Global Environment Facility (GEF), the interim operating entity of the financial mechanism, the task of meeting the agreed full costs of the activities required by Article 12.1 of the Convention. This would include meeting the agreed full costs of relevant adaptation activities undertaken in the context of the formulation of national communications; such activities may include studies of the possible impacts of climate change, identification of options for implementing the adaptation provisions (especially the obligations contained in Article 4.1(b) and 4.1(e)) of the Convention, and relevant capacity building.
- (ii) If it is decided in accordance with paragraph (c) above, that it has become necessary to implement the measures envisaged in Stages II and III, the Annex II Parties will provide funding to implement the adaptation measures envisaged in these stages in accordance with their commitments contained in Article 4.3 and 4.4 of the Convention.
- (iii) In its review of the financial mechanism of the Convention under Article 11.4, the COP, taking into account studies conducted and options for adaptation identified during Stage I, any emerging evidence of the adverse effects of climate change, as well as the conclusions reached by the Committee and its own decisions on this issue, must decide on the channel/channels, under Article 11 of the Convention, to be used for the funding referred to in the preceding sub-paragraph, to implement the adaptation measures envisaged in Stages II and III.

7. On agreed full incremental costs, the Committee concluded that the various issues of incremental costs were complex and difficult and that further discussion on the subject was therefore needed. It also concluded that the application of the concept of "agreed full incremental costs" should be flexible, pragmatic and on a case-by-case basis. Guidelines in this regard would be developed by the COP at a later stage on the basis of experience. In this regard, the interim secretariat was requested to seek further information from countries, international organizations and relevant groups and to compile this information for consideration by the Committee at its eleventh session.

8. Concerning the transfer of technology, the interim secretariat was requested to prepare a paper on transfer of technology covered by the Convention including elements of a framework for such transfer, modalities and ways and means of operationalizing the relevant Articles mentioned in the Convention pertaining to transfer of technology. In addition, delegations were invited to submit their views on this issue by mid-October.

9. On modalities for the functioning of operational linkages between the COP and the operating entity of the financial mechanism, it was agreed that:

(a) The COP, the supreme body of the Convention, and the entity or entities entrusted with the operation of the financial mechanism, shall agree upon arrangements to give effect to the provisions of paragraphs 1 and 2 of Article 11 through the operational linkages which are discussed below;

(b) In line with Article 11.1 of the Convention, the COP will, after each of its sessions, communicate to the governing body of the operating entity relevant policy guidance for implementation and action by that governing body, which shall accordingly ensure the conformity of the entity's work with the guidance of the COP. Guidance from the COP will address issues relating to policies, programme priorities and eligibility criteria, as well as possible relevant aspects of the activities of the operating entity that are related to the Convention;

(c) The governing body of the operating entity has the responsibility of ensuring that funded projects related to the Convention are in conformity with the policies, eligibility criteria and programme priorities established by the COP. It will report regularly to the COP on its activities related to the Convention and on the conformity of those activities with the guidance received from the COP;

(d) Regular reports by the Chairman or secretariat of the operating entity to its governing body will be made available to the COP through its secretariat. Other official documentation of the operating entity should also be made available to the COP through its secretariat;

(e) In addition, the COP should receive and review at each of its sessions a report from the governing body of the operating entity which should include specific information on how it has applied the guidance and decisions of the COP in its work related to the Convention. This report should be of a substantive nature and incorporate the programme of future activities of this entity in the areas covered by the Convention and an analysis on how the entity, in its operations, implemented the policies, eligibility criteria and programme priorities related to the Convention established by the COP. In particular, a synthesis of the different projects under implementation and a listing of the projects approved in the areas covered by the Convention, as well as a financial report including accounting and evaluation of its activities in the implementation of the Convention, indicating the availability of resources, should be included;

(f) In order to meet the requirements of its accountability to the COP, reports submitted by the governing body of the operating entity should cover all its activities carried out in implementing the Convention, whether decisions on such activities are made by the governing body of the operating entity or by bodies operating under its auspices for the implementation of its programme. To this end, it shall make such arrangements with such bodies as might be necessary regarding the disclosure of information;



(g) The funding decisions for specific projects should be agreed between the developing country Party concerned and the operating entity in conformity with policy guidance from the COP. However, if any Party considers that a decision regarding one of the specific projects does not comply with the policies, eligibility criteria and programme priorities established by the COP in the context of the Convention, the COP should analyse the observations presented and take decisions on the basis of compliance with such policies, eligibility criteria and programme priorities. In the event that the COP considers that this specific project decision does not comply with the policies, eligibility criteria and programme priorities established by the COP, it may ask the governing body of the operating entity for further clarification on this specific project decision and in due time ask for a reconsideration of that decision;

(h) The COP will periodically review and evaluate the effectiveness of all modalities established in accordance with Article 11.3. Such evaluations will be taken into account by the COP in its decision, pursuant to Article 11.4, on the arrangements for the financial mechanism.

10. The Committee invited the interim secretariat to elaborate, for consideration at its eleventh session, substantive elements that will need to be included in the arrangements that are to be drawn up under Article 11.3 of the Convention. These elements should be elaborated in consultation with the secretariat of the GEF.

## B. ADAPTATION

### GERMANY

(On behalf of the European Community and its member States)

Mr. Chairman, I asked for the floor to make a statement on behalf of the European Union. As you know, the EU has submitted a paper through the German Presidency, which is included in the document A/AC.237/Misc.38/Add.1. The paper reviews the provisions of the Convention; it looks at the options to implement them; and it proposes a balanced, coherent approach to the problem of "adaptation". As the note is quite extensive, we will highlight only a few points.

#### **I would like to make three preliminary remarks:**

First of all, the objective of the Convention, as stated in Article 2, is to prevent dangerous anthropogenic interference with the climate system. If this objective is achieved, it may prevent the need for a major effort on adaptation. On this basis, the European Union considers the elaboration and implementation of mitigation measures as of the highest priority under the Convention.

Secondly, we want to recall that the adaptation measures which developing country parties are required to undertake include those in Article 4.1 (b) and (e) of the Convention. These measures are covered by Article 12.1, under which each Party shall communicate to the COP a general description of steps taken or envisaged to implement the Convention. The finance to be provided for these measures are described in Article 4.3. In addition, developing countries may take other adaptation measures, not required by Art. 4.1. Art. 4.4 says that the developed countries will assist particularly vulnerable countries with the costs of adaptation.

Mr. Chairman, the Member States of the European Union reiterate that they will provide finance for adaptation required by Article 4.3 and 4.4.

Thirdly, the Convention does not clearly stipulate how this finance must be provided. Article 11 mentions a number of alternative channels for assistance:

- the financial mechanism described in Article 11, para. 1 to 4;
- bilateral, regional and other multilateral channels mentioned in Article 11.5.

However, the European Union believes that for those adaptation-related measures covered by the Convention and financed by the financial mechanism the COP would need to

- establish policies, programme priorities and eligibility criteria for the financing of those measures; and

- entrust the financing of those measures to one or more existing entities, in accordance with the requirements of Article 11.

### **The EU-proposal: A three-stages approach for adaptation**

Mr. Chairman, the EU has noted carefully the discussions on adaptation at previous sessions. In order to make progress at this session, we suggest to adopt a balanced and coherent **approach in stages**.

At INC9, the Committee recognized the **need for more information and analysis** on the meaning of adaptation and on particular measures that might be considered, including under the financial mechanism. In the view of the EU a clear assessment of the extent of climate change, as defined by the Convention, and its likely adverse effects, is not currently available. This view is supported by the intervention of Mr. Bolin, Chairman of the IPCC, in the Plenary and from the Synthesis Report on Adaptation, prepared by the Secretariat for this session. However, on a precautionary approach, it is possible and consistent with the Convention, to envisage a number of stages in the process of dealing with adaptation.

The **initial Stage 1** will lay the foundations for Stages 2 and 3, through studies of the possible impacts of climate change, to identify vulnerable areas and policy options for adaptation, as well as appropriate capacity building. In its paper, the EU **proposes** that for **Stage 1** the COP should entrust to the GEF the task of meeting the agreed full costs of activities required by Article 12.1. The task would include meeting the agreed full costs of relevant adaptation activities undertaken in the context of the formulation of national programmes to implement the Convention.

Mr. Chairman, as the paper by the European Union shows, this approach is consistent with the GEF Instrument. It is also consistent with our agreement at INC 8 that the funding of activities covered by Article 12.1 will have priority and that, in the initial period, emphasis should be placed on enabling activities including planning, capacity building, training and research. Within this general framework, the COP may develop specific policies, programme priorities and eligibility criteria to be applied to Stage 1 adaptation activities.

In the medium and long term, assistance for adaptation should be provided by competent agencies on a continuous basis. The EU believes that the multilateral and regional development agencies should have the main role in supporting adaptation, as they have a comparative advantage resulting from their experience with adaptation-related activities such as coastal zone management, water resources and agriculture, and control and management of land degradation and floods. We therefore **propose** that the GEF should use the expertise of appropriate regional and other multilateral development agencies to assist developing countries with the Stage 1 activities as already described above.

At INC 9, we also agreed that it was important to seek and maintain consistency in the area of adaptation between the financial mechanism and the operations of other agencies. The paper of the EU suggests that the COP should establish informal links with the relevant regional and other multilateral development agencies mentioned in Article 11.5, including a system for monitoring and reporting on their activities related to climate change (included adaptation).

Now I come to **Stage 2 and 3**. As the COP is required to review the financial mechanism within four years, it should take, on that occasion, into account the studies conducted and the options for adaptation identified during stage 1, as well as any evidence of climate change and its impacts. If evidence of climate change and its adverse effects begins to emerge, then further steps may be necessary:

- at **Stage 2**, measures, including further capacity building, in vulnerable countries or regions identified at Stage 1, in order to prepare for adaptation; Article 4.1 (e) envisages that parties will cooperate in this;
- at Stage 3, measures to facilitate adequate adaptation, and other adaptation measures, as envisaged by Article 4.1(b) and 4.4.

If it is necessary to move into Stage 2 or Stage 3 of adaptation, the COP will also need to decide whether these stages should be handled under the **financial mechanism**. The EU **proposes** that, in order to take this decision, the COP should:

- consider, on the basis of advice from SUBIM and SUBSTA as well as the information communicated by Parties, whether to establish policies, programme priorities and eligibility criteria for Stage 2 and 3;
- and also consider, in consultation with the GEF and appropriate regional and multilateral development agencies, whether to entrust the operation of the financial mechanism for Stage 2 and 3 of adaptation to one or more existing international entities, in accordance with Article 11, paras. 1 to 4.

The elements of this proposal are contained in the final pages of the European Union paper. We hope the proposal is clear. The EU is of course ready to provide any clarifications that delegates may require.

Mr. Chairman, as the INC has had a long debate on adaptation the European Union has deliberated very carefully before making a proposal and discussed the elements of that package with many other delegations. We believe the package reflects the very delicate balance of opinion in the INC. We hope that it will enable the INC to reach agreement, and thereby provide assistance to the developing countries who may be vulnerable to climate change. We are convinced that reaching an agreement on adaptation early at this session will also help us to make progress on the other issues we still have to resolve before the COP 1.

## C. MITIGATION

### GERMANY

(On behalf of the European Community and its member States)

#### MITIGATION IN THE CONTEXT OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE - FINANCIAL ISSUES

### 1. INTRODUCTION

As the INC at its eighth and ninth session already decided on the role of enabling activities and as it agreed during its tenth session on a stages approach for adaptation, INC 11 will still have to take decisions with respect to mitigation.

Although not explicitly stated, mitigation activities aim at meeting the **ultimate objective** of the Convention described in **Article 2**:

"...to achieve,...., stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system..."

The achievement of this objective is strongly related to the development of a well balanced system between the reduction of sources and the enhancement of sinks of anthropogenic greenhouse gases (GHG). It is therefore necessary both to reduce emissions and to increase the capacity of sinks to absorb them, being the reduction and prevention of emissions the easier way to contribute to the stabilization of GHG concentrations.

Among the various GHGs, CO<sub>2</sub> is presently the most important important one. The burning of fossil fuels and the effects of deforestation which - following the current trend - may lead to a doubling of the concentration of carbon dioxide in the atmosphere by 2030. Although the effects on climate and on human activities resulting from this phenomenon are presently uncertain, they represent such a potential threat for humanity that the actual lack of full scientific certainty cannot be used as a reason for postponing measures and activities to reduce GHG emissions.

Although the reduction of GHG emissions is a worldwide problem, the developed countries are presently the major contributors to GHG emissions and, have a special responsibility to reduce their home-made emissions as stated in the Convention (Art. 3.1). However, developing countries are forecast to become the major source for CO<sub>2</sub> emissions during the next 40 years, raising their emissions from approximately one third to more than half of global emissions by the year 2030. The international community therefore construed a new basis for cooperation whereby developed countries will assist developing countries to avoid the rapid increase of currently relative low levels of emissions, taking into account their needs for economic and social development.

## 2. PROVISIONS OF THE CONVENTION WITH RELEVANCE FOR MITIGATION

Among the **principles** which should guide the actions of the Parties to achieve the objective of the Convention, i.e. including mitigation activities, the Convention states in **Article 3**:

"The Parties should protect the climate system...in accordance with their common but differentiated responsibilities and respective capabilities..."(Art. 3.1)

"The specific needs and special circumstances of developing country Parties,... should be given full consideration." (Art. 3.2)

"The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible costs. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources and sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors...." (Art. 3.3)

"...Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, ... (Article 3.4)

With respect to **specific commitments** related to mitigation, Parties included in Annex I will have to take the lead (Article 4.2 (a), (b), (c) etc.), as **Article 4.2 (a)** states:

"(a) Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention..."

More **general commitments** for all Parties, i.e. including developing country Parties, are contained in **Article 4.1**:

"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:

(a) Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties;

(b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change;

(c) Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;"

"(d) Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems;

"(f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change;..."

Developing countries will be assisted by developed country Parties in their efforts to implement these measures in order to mitigate climate change (see Arts. 4.3, 4.5, 4.7 etc.).

### **3. MITIGATION AND THE FINANCIAL MECHANISM**

In ratifying the Convention, the developed country Parties **committed** themselves

- "...to provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1." (reporting as referred to in 4.1 (a))

- "...to provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article...". (mitigation measures such as contained in 4.1 (b), (c), (d), (f) and referred to in 12.4).

The European Union believes that these financial resources should be provided through the financial mechanism. In addition, assistance related to mitigation may be provided by other bi- and multilateral organisations.

### 3.1 Policies

The GEF, as the international entity entrusted with the operation of the interim financial mechanism of the Convention, will support mitigation activities undertaken by developing countries under the Convention, ensuring that:

- GEF-financed mitigation activities will aim to meet the objective of the Convention. This means that the most cost-effective ways to meet the objective should be sought. (Art. 3.3.)
- GEF-financed activities will be country-driven. This means that the developing countries should formulate and implement their own national programmes, seeking coherence with other relevant policies and being supportive of their established development priorities as well as the particular needs of their local communities, using GEF finance and technical assistance. (Art. 3.4, 4.1 (b), (c), (d) and (f).)
- GEF-financed mitigation activities should not impede developing countries' efforts for sustainable economic and social development (Art. 3.2, 3.4). This means that the GEF should finance the agreed full incremental costs of mitigation activities.

### 3.2 Priorities

The consideration formulated above have led the European Union to believe that, at the present stage, the GEF should give priority to providing finance and technical assistance for the following three priorities, all priorities being directed to programmes and projects which have a direct effect on mitigation of GHG emissions:

**Priority 1: Formulation of national programmes\* in accordance with Art. 4.1 (b).**

GEF assistance should give priority to providing assistance that will enable national programmes

- (i) to meet the objective of the Convention.
  - (ii) to be consistent with the development needs of the country.
  - (iii) to be comprehensive and cost-effective:
- GEF assistance should enable programmes to be based on an inventory of sources and sinks (Art. 4.1 (a)), and an appraisal of all relevant mitigation options, including their costs and their impact on GHG emissions.

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\* This paper focuses on mitigation; areas such as adaptation are treated elsewhere.



The most cost-effective mitigation options may include:

- energy and transport efficiency measures, both increase of supply efficiencies and demand side measures;
- the application of improved and new technologies, for renewable energies such as wind, biomass, solar energy, photovoltaics etc.,
- policy reforms, including price reforms and other market mechanisms, and
- changes in production methods and demand/consumption patterns in order to minimise potential needs for energy, transport and natural resources.
- GEF assistance should enable programmes to minimise the cost to the developing country (in economic terms, including disruption of economic and social systems, and environmental consequences), and minimise the need for extended financial inflows from the GEF.

**Priority 2: Capacity-building and technology transfer and cooperation for mitigation**

(i) The GEF should finance capacity-building in developing countries to enable those countries to formulate, implement and update programmes to mitigate climate change. Such capacity-building will require a long-term effort, which should be focused on local, national, regional centres of expertise, including NGOs as well as governmental bodies.

(ii) The GEF should promote access for developing countries to a wider range of options in areas such as energy and transport efficiency, policy reforms, new technologies, and changes in unsustainable production and consumption patterns and contribute to improve the scientific and technological foundation of action.

**Priority 3: implementation of national programmes**

The GEF should meet the incremental costs of implementing programmes to mitigate climate change. At the same time, GEF assistance should enable programmes to establish policy coherence with activities financed by private investment, as well as from bilateral, regional and multilateral sources (Art. 11.5).

## D. INCREMENTAL COSTS

### GERMANY

(On behalf of the European Community and its member States)

#### INCREMENTAL COSTS: THE E.U. APPROACH

##### **§ 1. Introduction:**

###### § 1.a Incremental cost in the FCCC

In order to attend to global environmental concerns such as climate change, developing countries will have to adopt specific additional measures and to bear the incremental costs of doing so, even though these measures benefit the international community as a whole. The FCCC therefore stipulates that developed countries will provide "*new and additional*" funds to underwrite the "*agreed full incremental costs*" of the measures taken by developing countries to advance the ultimate objective of the Convention (art. 4 § 3).

###### § 1.b Incremental cost of projects supported by the financial mechanism

The European Union stresses the significance of this concept for the FCCC as well as for its financial mechanism : the incremental cost principle will indeed play an important role first in determining the level of financing to be made by the financial mechanism of the FCCC in respect of each eligible measure or project in a developing country, and second in selecting and ranking these measures and projects on the basis of their cost-effectiveness in achieving the ultimate objective of the FCCC.

##### **§ 2. Incremental Cost as a cost allocation principle**

###### § 2.a A cost allocation principle

The incremental cost principle is a cost allocation principle, insofar as it will be the basis of the determination of the level of grant assumed by the financial mechanism of the FCCC for any given action that protects the global environment. The basic intervention principle is to encourage the developing countries to choose investments paths they would not normally opt for, by underwriting the additional costs (or incremental costs) incurred by these investment choices, relative to what the developing countries otherwise would have done (referred as "baseline"). Thus, the incremental cost of a alternative project, as the term implies, is a

difference between two costs and can be defined as the additional cost, over the cost of a national sustainable development baseline, of securing global benefits that are additional to those eventually obtainable through the baseline action alone.

#### § 2.b Baseline issues

The incremental cost of a given programme or project is defined in relation to a national baseline, that will have to be calculated on a case by case basis within the framework of countries studies. Multiple data will have to be taken into account, whether national variables (economic policy, tariff structures, etc) or international parameters (international trade, energy prices, etc). Negotiations with the beneficiary countries should therefore be flexible, but the European Union considers that the incremental costs linked with potential economic distortions should not be covered by the financial mechanism of the Climate Convention. Likewise, it does not appear desirable to finance actions for reducing emissions in countries which do not agree to gradually eliminate potential economic distortions which would go against the reduction goals striven for.

#### § 2.c Transaction costs financing

The E.U. understanding of the transaction costs concept is the following:

The fact that the alternative solution is not being implemented is often due to problems such as lack of information or obstacles to technology diffusion. The necessary removal of these obstacles will then incur extra costs, the so-called "transaction costs", that were not taken into account in a first estimate of the incremental cost of the project or programme.

Rather than using a static approach, it will be essential to consider the concept of incremental cost in a dynamic perspective which includes the need for a gradual learning process of the technical, economic, fiscal, regulatory and institutional measures likely to lead, in time, to a better adjustment between the requirements of development and the prevention of climate change. The European Union therefore expresses its full agreement with the principle of financing the transaction costs of implementing measures aimed at preventing climate change, as long as the funding of this costs contributes to foster the learning process related to the synergies between environment and national development.

#### § 2.d Negative cost projects

For a whole series of activities, such as energy efficiency, the net incremental cost could appear as null or negative, meaning that the beneficiary country should implement the project in its own best economic interest. However, the assumption of negativity sometimes arises from an inadequate exploration of the true prices of transaction costs as defined above : these projects could then be viewed as eligible for financing from the financial mechanism of the FCCC if the transaction costs were included in the incremental cost calculation.

### **§ 2.e Recommendations for operationality**

The Parties could recommend that the financial mechanism of the FCCC develops paradigm cases on the calculation of incremental cost for some standard types of activities. These paradigm cases should include all type of intervention listed in the taxonomy developed in the STAP Analytical Framework for Global Warming. The determination of incremental costs would then be facilitated by the availability of some type of model projects, corresponding to the substitution of certain typical baseline activities by typical alternatives. Efforts aiming at making operational the currently available methodologies to determine baselines and calculate the incremental costs and benefits should therefore be promoted. In the meantime, the application of the incremental cost principle should be flexible, pragmatic and on a case-by-case basis.

### **§ 3. Incremental Cost and project selection: to be placed in a long term perspective**

The strategies for reaching the objectives of the Convention must take into account the principle of economic efficiency. But the European Union reminds that the concept of least-cost planning of the actions aimed at preventing climate warming does only make sense within a long term perspective based on the ultimate objective of the FCCC, i.e. the stabilization of the atmospheric concentrations of greenhouse gases. The incremental cost/global benefit ratio should therefore not represent the sole criterion for decision and financing, since an approach of this kind, by favoring the most efficient short-term reduction options, may lead to neglecting strategic longer term options and the balance of funding, both geographically and by type of activity. The incremental cost/global benefit ratio, at the present stage, should only play a determining role in the selection of projects when these are actually comparable as far as their nature and impact over time are concerned.

## **LA NOTION DE SURCÔUT: APPROCHE DE L'U.E.**

(Original French/English)

### **§ 1. Introduction**

#### **§ 1.a La notion de surcoût dans le cadre de la Convention Climat**

Les pays en développement, afin d'apporter une réponse aux risques pesant sur l'environnement global, tels que le changement climatique, seront amenés à adopter des mesures additionnelles spécifiques qui entraîneront pour eux un surcoût financier, alors même que le bénéfice qui résultera de ces mesures concerne l'ensemble de la communauté internationale. Aussi l'article 4 § 3 de la Convention Climat stipule-t-il que les pays développés fourniront les "ressources nouvelles et additionnelles" nécessaires pour couvrir la "totalité des coûts supplémentaires convenus" des mesures prises par les pays en développement pour contribuer à la réalisation de l'objectif ultime de la Convention.

#### **§ 1.b La notion de surcoût et le mécanisme financier de la Convention**

L'Union Européenne souligne l'importance du concept de surcoût pour la Convention Climat comme pour son mécanisme financier : en effet, le principe de surcoût jouera un rôle déterminant non seulement dans la détermination du montant du financement susceptible d'être apporté par le mécanisme financier de la Convention à chaque projet ou mesure éligibles, mais aussi en matière de sélection et de hiérarchisation de ces projets et mesures en fonction de leur rapport coût-efficacité au regard de l'objectif ultime de la Convention.

### **§ 2 La notion de surcoût, principe de répartition du coût total d'un projet**

#### **§ 2.a Un principe de répartition**

Le principe du surcoût est un principe de répartition des coûts qui sera à la base du calcul du financement apporté par le mécanisme financier de la Convention Climat pour toute action contribuant à la protection de l'environnement global. Le principe d'intervention consiste à encourager les pays en développement à privilégier certaines options d'investissement qu'ils auraient normalement écartées, en couvrant le surcoût induit par ce choix par rapport à une situation de référence correspondant à ce que ces pays auraient fait en temps normal. C'est pourquoi le surcoût d'un projet proposé comme alternative à un projet de développement durable de référence est une différence entre deux coûts, et peut être défini comme le supplément de coût permettant, par rapport à une situation de référence, d'obtenir un bilan plus avantageux du point de vue de l'environnement global.

## § 2.b Problèmes liés à la définition de la situation de référence

Le surcoût d'un projet donné se définit par rapport à une situation nationale de référence qui devra être déterminée au cas par cas dans le cadre des études relatives à chaque pays. De nombreuses données devront être prises en compte, qu'il s'agisse de variables nationales (politique économique, structures tarifaires, etc.) ou de paramètres internationaux (commerce international, prix de l'énergie, etc.). Ceci rend nécessaire une certaine souplesse dans le cadre des négociations avec les pays bénéficiaires; néanmoins, l'Union Européenne considère que les surcoûts associés à d'éventuelles distorsions économiques ne sauraient être pris en charge par le mécanisme financier de la Convention Climat. De même, il ne paraît pas souhaitable de financer des actions de réduction d'émissions dans des pays qui n'accepteraient pas d'éliminer progressivement d'éventuelles distorsions économiques qui iraient à l'encontre des objectifs de réduction d'émissions poursuivis.

## § 2.c Le financement des coûts de transaction

La signification de la notion de coûts de transaction pour l'Union Européenne est la suivante:

Le fait que l'option la plus favorable à l'environnement mondial ne soit pas choisie est souvent dû à un certain nombre de problèmes tels que le manque d'information ou l'existence d'obstacles à la diffusion des technologies. Il est donc nécessaire de bien intégrer dans le calcul des surcoûts les coûts dits de transaction, c'est-à-dire les coûts liés à la coordination des activités et à la levée des obstacles identifiés.

Plutôt qu'une approche statique, il sera indispensable de considérer la notion de surcoût dans une perspective dynamique incluant la nécessité d'un apprentissage progressif des mesures techniques, économiques, fiscales, réglementaires et institutionnelles susceptibles de conduire à terme à une meilleure adéquation entre les impératifs du développement et la prévention du changement climatique. C'est pourquoi l'Union Européenne exprime son plein accord au principe du financement des coûts dits de transaction, c'est-à-dire des coûts liés à la coordination des activités visant à la prévention du risque climat, dès lors que le financement de ces coûts contribue à mettre l'accent sur le processus d'apprentissage des synergies entre le développement national et l'environnement global.

## § 2.d Le problème des projets à surcoût négatif ou nul

Pour certains types d'interventions, comme par exemple les projets visant une meilleure efficacité énergétique, le surcoût par rapport aux investissements effectivement mis en oeuvre peut apparaître nul voire négatif, ce qui signifie que le pays considéré aurait dû retenir l'option alternative dans son propre intérêt économique. Cependant, l'apparente négativité des surcoûts est parfois due à une insuffisante exploration de la valeur réelle des coûts de transaction tels qu'ils sont décrits ci-dessus: ces projets pourraient être considérés comme éligibles par le mécanisme financier de la Convention Climat si les coûts de transaction étaient inclus dans le calcul des surcoûts.

## § 2.e Orientations pour une traduction opérationnelle

Les Parties pourraient recommander que le mécanisme financier de la Convention Climat développe des cas-types relatifs au calcul du surcoût pour des catégories standard d'activité. Ces cas-types devraient inclure toutes les interventions recensées dans la typologie développée par le STAP (Analytical Framework for Global Warming). Le calcul des surcoûts sera alors facilité par l'existence d'exemples standards, correspondant à la substitution de certaines activités de référence-types par des alternatives-types. Les travaux visant à proposer des méthodes d'évaluation rigoureuses et opérationnelles de ces coûts et bénéfices doivent donc être encouragés. En attendant toutefois, l'application du principe du surcoût devra être flexible, pragmatique et se faire au cas par cas; en particulier, les Parties devraient recommander au mécanisme financier de la Convention de considérer avec attention l'équilibre thématique et géographique de ces activités.

## § 3 Notion de surcoût et sélection des projets : à placer dans une perspective de long terme

Les stratégies visant à la réalisation des objectifs de la Convention Climat doivent prendre en compte l'impératif d'efficacité économique. Néanmoins, l'Union Européenne rappelle que la notion de planification au moindre coût des actions liées à la prévention du réchauffement climatique n'a en effet de sens que dans une perspective de long terme axée sur l'objectif ultime de la Convention, c'est-à-dire la stabilisation des concentrations atmosphériques des gaz à effet de serre. Le rapport surcoût / bénéfice global ne devrait donc pas être le seul critère de décision et de financement, dans la mesure où une telle approche, en privilégiant les options de réduction les plus efficaces à court terme, pourrait conduire à négliger des options stratégiques à plus long terme. Le ratio surcoût / bénéfice global, à ce stade, ne devrait jouer un rôle déterminant en matière de sélection qu'en présence de projets effectivement comparables au regard de leur nature et de leur impact temporel.

## E. CAPACITY BUILDING

### GERMANY

(On behalf of the European Community and its member States)

#### CAPACITY BUILDING IN THE CONTEXT OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

##### I. INTRODUCTION

The aim of this note is to recall the capacity building-related provisions of the Convention, to analyse the links with the respective provisions for the financial mechanism and, as there has not yet been a detailed discussion, to enumerate some typical capacity building activities for further consideration.

The INC decided at its eight session and reiterated at its ninth session with reference to **enabling activities**:

"priority should be given to the funding of agreed full costs (or agreed full incremental costs, as appropriate) incurred by developing country Parties in complying with their obligations under Article 12.1 and other relevant commitments under the Convention. In the initial period emphasis should be placed on enabling activities undertaken by developing country Parties such as planning, endogenous capacity building including institutional strengthening, training, research and education, that will facilitate implementation, in accordance with the Convention, of effective response measures" (see A/AC.237/55, para. 80 and A/AC.237/41, para. 84(ii))

Consequently, para. 80 gives an **implicit definition** of "enabling activities" which comprises most of the activities normally referred to in other fora by the term "capacity building".

##### II. PROVISIONS OF THE CONVENTION WITH RELEVANCE FOR CAPACITY BUILDING

As the Convention does not give a clear definition of what is meant by capacity building, many of the references are more indirect than very explicit. For example, the commitments contained in **Article 4.1**, subparas. **a through h**, do all contain implicitly elements of capacity building.

**Article 4.1(i)** requires Parties to

"promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-governmental organizations."



**Article 4.5** refers to the role of developed country Parties and other developed Parties included in Annex II concerning

"the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention."

**Article 5, Research and Systematic Observation**, is relevant to many measures in the area of capacity building. It requires the Parties to

(a) Support and further develop, as appropriate, international and intergovernmental programmes and networks or organizations aimed at defining, conducting, assessing and financing research, data collection and systematic observation, taking into account the need to minimize duplication of effort;

(b) Support international and intergovernmental efforts to strengthen systematic observation and national scientific and technical research capacities and capabilities, particularly in developing countries, and to promote access to, and the exchange of, data and analyses thereof obtained from areas beyond national jurisdiction; and

(c) Take into account the particular concerns and needs of developing countries and cooperate in improving their endogenous capacities and capabilities to participate in the efforts referred to in subparagraphs (a) and (b) above."

**Article 6, Education, training and public awareness**, which so far has not received great attention in discussions within the INC, specifies, referring to Article 4.1(i), that the Parties shall

(a) Promote and facilitate at the national and, as appropriate, subregional and regional levels, and in accordance with national laws and regulations, and within their respective capacities:

(i) The development and implementation of educational and public awareness programmes on climate change and its effects;

(ii) Public access to information on climate change and its effects;

(iii) Public participation in addressing climate change and its effects and developing adequate responses; and

(iv) Training of scientific, technical and managerial personnel.

(b) Cooperate in and promote, at the international level, and, where appropriate, using existing bodies:

(i) The development and exchange of educational and public awareness material on climate change and its effects; and

(ii) The development and implementation of education and training programmes, including the strengthening of national institutions and the exchange or secondment of personnel to train experts in this field, in particular for developing countries."

Article 6 goes somewhat beyond Article 4.1(i) and is to be counted, as well as Article 5, among the commitments described in Article 4.1 (e, f, g, h). The activities referred to in Article 4, 5 and 6 are also possible elements of **reporting** (references in Article 12.1 and Article 7.2). Therefore, they ought to be integrated, as appropriate, into the Guidelines for the Preparation of First Communications by non-Annex I Parties.

### III. FINANCIAL ASPECTS OF CAPACITY BUILDING

1. Eligibility of activities and countries within the framework of the financial mechanism

**Article 4.3** says:

"The developed country Parties and other developed Parties included in annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1."

This means, that **developing countries** are eligible for the funding of agreed full costs through the financial mechanism for capacity building activities related to **communication of information** to the COP.

However, **Article 4.3** also suggests the finance of **full agreed incremental costs** of capacity building activities in developing countries related to Article 4.1 through the financial mechanism, as it says:

"They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11, in accordance with that Article."

As **technology transfer** inevitably does have capacity building-components, **Article 4.5** also has to be taken into consideration. It states

- with respect to **developing countries** and, implicitly, **countries in transition**:

"The developed country Parties and other developed Parties included in annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention."

- with respect to **only developing countries**

"In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties."

In **conclusion**, it seems that

- capacity building in the context of Article 4.1 (especially (g) and (i)) and therefore Articles 5 and 6 are classified as eligible for the financing of "agreed full incremental costs" of the Convention, whereas
- capacity building for the fulfilment of the reporting requirements of Article 12.1 can be subsumed under "agreed full costs".

The "Instrument for the Establishment of the Restructure **Global Environment Facility**" (further on called: Instrument) states in Para.6, the GEF "shall, on an interim basis, operate the financial mechanism for the implementation of the United Nations Framework Convention on Climate Change...".

Para. 2 of the Instrument the restructured GEF clearly states

"The GEF shall operate... as a mechanism for international cooperation for the purpose of providing new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve global environmental benefits..."

**Para. 6** also covers those activities whose agreed full costs shall be financed:

"The GEF shall also be available to meet the agreed full costs of activities under Article 12, paragraph 1, of the United Nations Framework Convention on Climate Change".

## 2. **Financing of capacity building outside the financial mechanism**

As some capacity building-measures with relevance for the Convention are already funded by bilateral and multilateral institutions, additional support for capacity building in future is to be expected also from sources **outside the financial mechanism**. This is implicitly encouraged through the following two provisions contained in the Convention:

**Article 11.5** states that

"the developed country Parties may also provide and developing country Parties avail themselves of, financial resources related to the implementation of the Convention through bilateral, regional and other multilateral channels."

Furthermore **Article 4.5** says:

"Other Parties and organizations in a position to do so may also assist in facilitating the transfer of such technologies."

As there exists already a large number of approaches to planning, capacity building etc. there will be a need for intensive coordination and cooperation within the countries and among donors.

## IV. CAPACITY BUILDING: SOME ORIENTATIONS

On the basis of the previous considerations and the content of the Convention, in view of the European Union capacity building-related activities should:

- be country-driven and based on national programmes addressing climate change; countries may request assistance for capacity building related activities that build upon existing capacities and institutions and aim at strengthening national and local capacities, enabling countries to implement the FCCC;
- integrate different environmental, social, and economic perspectives and objectives and facilitate cross-sectoral communication, policy development and decision making;
- allow broad participation of relevant actors in order to forge a partnership between government, business, NGOs and other interests;
- build, as far as possible, upon existing institutions, plans and strategies, for example National Environmental Action Plans (NEAPs), National Conservation Strategies or the Tropical Forestry Action Plan.

## V. CONCLUSIONS

On the basis of the previous analysis, the European Union concludes that:

1. Capacity building is required to facilitate the implementation of effective response measures, especially measures to promote the objective of the Convention.
2. The financial mechanism will finance the agreed full costs of capacity building required for measures covered by Article 12.1, and the agreed full incremental costs of capacity building required for measures covered by Article 4.1. In addition, capacity building related to the implementation of the Convention may also be financed by appropriate bi-and multilateral agencies.

## F. TRANSFER OF TECHNOLOGY AND COOPERATION

### PAPER NO. 1: COLOMBIA

Una adecuada transferencia de tecnología debe incluir los siguientes componentes:

#### **Asistencia Técnica**

Debe incluir por lo menos:

- Aumento de la capacidad institucional (capacity building), que haga posible el manejo de nuevas tecnologías a nivel gubernamental, local, y con agentes del sector privado.
- Desarrollo de herramientas de asistencia técnica, como bancos de datos, redes de información, talleres, seminarios, manuales, software, centros de transferencia tecnológica, etc.

#### **Investigación Conjunta**

Debe incluir actividades de cooperación que permitan un trabajo conjunto con los agentes de proceso de las nuevas tecnologías, tanto del sector público como privado. Puede involucrar el suministro y manejo de materiales y equipos de desarrollo y prueba para la industria, así como la evaluación, monitoreo de pruebas y mecanismos de difusión de los resultados técnicos.

#### **Mecanismos de Implementación**

Debe incluir actividades relacionadas con el estudio, puesta en marcha y desarrollo de proyectos piloto como estudios de prefactibilidad y factibilidad, generación y difusión de información, asesorías de mercado y necesidades; y evaluación, actualización y medición de tecnologías.

#### **Criterios para la selección de Proyectos**

Los proyectos seleccionados deberían en lo posible:

- Solucionar "cuellos de botella" tecnológicos,
- Desarrollar alternativas factibles para la protección del medio ambiente.
- Contener resultados de corto plazo y soluciones de largo plazo.
- Tener un impacto importante tanto ambiental como socioeconómico.

- Involucrar ventajas comparativas del país que permitan potenciar el uso de las tecnologías.
- Maximizar la relación costo-beneficio.
- Evaluar la factibilidad de rápida recuperación de la inversión en capital.
- Facilitar la transferencia tecnológica en términos concesionales y preferenciales.
- Fomentar la participación directa de los gobiernos para potenciar el desarrollo y uso de tecnologías por parte del sector privado en el corto plazo.
- Involucrar aspectos de mercado que hagan rentable la futura participación de la empresa privada en el uso de las tecnologías transferidas.

(Translation from Spanish)

**ESSENTIAL ELEMENTS FOR PROPER TRANSFER OF TECHNOLOGY IN THE  
CONTEXT OF THE UNITED NATIONS FRAMEWORK  
CONVENTION ON CLIMATE CHANGE**

Proper transfer of technology must include the following components:

Technical assistance

Must include at least:

- Capacity building so that new technologies can be handled both at governmental and local level, as well as with the private sector;
- Development of technical assistance tools such as databanks, information networks, workshops, seminars, manuals, software, technology transfer centres, etc.

Joint research

Must include cooperation activities for work to be carried out jointly with users of the new technologies, both from the public and from the private sector. It can involve the supply and handling of development and testing materials and equipment for industry, as well as evaluations, test monitoring and mechanisms for disseminating technical findings.

Implementation mechanisms

Must include activities relating to the study start-up and development of pilot projects, such as pre-feasibility and feasibility studies, information generation and dissemination, market and requirements counselling, as well as technology evaluation, updating and assessment.

Project selection

Projects selected should, as far as possible:

- Solve technological "bottlenecks";
- Develop feasible alternatives for the protection of the environment;
- Contain both short-term results and long-term solutions;
- Make an appreciable impact both in environmental and in socio-economic terms;



- Offer comparative advantages for the country so as to promote the use of technologies;
- Maximize the cost-benefit ratio;
- Determine the feasibility of rapid return on capital investment;
- Facilitate transfer of technology on concessional and preferential terms;
- Encourage direct participation by governments, with a view to promoting the development and use of technologies on the part of the private sector over the short term;
- Take into consideration market factors which would make future participation by private enterprise in the use of transferred technologies an economic proposition.

**PAPER NO. 2: GERMANY**

(On behalf of the European Community and its member States)

**TECHNOLOGY TRANSFER AND COOPERATION IN THE CONTEXT OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE**

**1. PROVISIONS OF THE CONVENTION WITH RELEVANCE FOR TECHNOLOGY TRANSFER AND COOPERATION**

Article 4.1 (c) requests – as referred to in the chapeau of Article 4 – all Parties, "taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances," that they shall

"Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;"

Article 4.1 (g) contains the commitment to

"Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to further the understanding and to reduce or eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change and the economic and social consequences of various response strategies;"

Article 4.5 states:

"The developed country Parties and other developed Parties included in annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties. Other Parties and organizations in a position to do so may also assist in facilitating the transfer of such technologies."

Article 4.7 provides:

"The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed

country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."

Article 4.8 says:

"In the implementation of the commitments in this Article, the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures,..."

Article 4.9 states:

"The Parties shall take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology."

In conclusion, in the European Unions, the FCCC implies that with respect to developing countries technology transfer and cooperation (TT) as well as the provision of know-how should be strengthened with reference to three possible areas of action:

- the reporting on greenhouse gas emissions, which might imply a capacity building component; (Article 12.1)
- mitigation measures to reduce these emissions, which normally do have an inbuilt technology transfer component; (Art. 4.1)
- activities concerning the effects of climate change, which has to be dealt with in the context of "adaptation". (Art. 4.1 (b), (e), and (f) and 4.8).

## 2. TECHNOLOGY TRANSFER AND COOPERATION AND FINANCIAL RESOURCES: PROVISIONS OF THE CONVENTION

The Convention contains a commitment by the developed countries to intensify the transfer of technologies and related know-how which contribute to a reduction of greenhouse gas emissions as well as to reduce the negative impact of climate change, including additional efforts concerning the provision of finance:

Article 4.3 says:

"The developed country Parties and other developed Parties included in annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology,

needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11 , ..."

The European Union therefore reaffirms that, **within the financial mechanism** (Article 11.1 to 4) and along policies, programme priorities and eligibility criteria will have to be defined by the COP, finance shall be provided to developing country Parties:

- for reporting activities (full agreed costs);
- for activities contained in Article 4.1., especially in 4.1 (c) (agreed full incremental costs).

All projects and programmes financed through the financial mechanism but also those supported by bilateral, regional and other multilateral channels (Article 11.5) do have components of transfer of technology and know-how.

References to "specific needs and concerns of developing countries" (4.8), to different types of developing countries (4.8 and 4.9), to "endogenous capacities and technologies" (4.5) etc. suggest that a country-driven approach in order to strengthen the technological capacity at the user side will be necessary.

**Article 4.5** refers to technology transfer to "other Parties", which means that not only developing countries, but also countries with economies in transition will be eligible for technology transfer and cooperation for activities which aim at the implementation of the Convention. As these countries are not eligible for funding under the financial mechanism, **Article 11.5** will apply. However, financial resources under this article, i.e. **outside the financial mechanism**, are also available for developing countries.

Concerning the problems and future orientation of technology transfer and cooperation, the outcome of the discussions which are taking place in other fora, such as the Commission on Sustainable Development, will also be of importance.

### 3. TECHNOLOGY TRANSFER AND COOPERATION AND STRENGTHENING OF TECHNOLOGICAL CAPACITY: THE EXPERIENCE TO BE BUILT UPON

**The typical components of technology-related cooperation** comprise

- the establishment or strengthening of training institutions;
- the establishment of specific units within technology institutes related to industry;
- the introduction of technical hardware respectively environmentally sound, i.e. improved or new, technological processes in agriculture and waste disposal.

The deficits identified so far in the application of these measures can be summarized as follows:

- all measures were aimed at the solution of isolated problems, not the establishment of efficient structures;
- new technological hardware did not always tie in with local know-how and the economic and socio-cultural environment; this sometimes was also the case with "appropriate technology";
- the new institutions were often not integrated into their environment, networking was not an explicit objective of the projects;
- a too narrow concept of technology was applied, which only took into consideration technical hardware, not the "soft" factors such as organisation and know-how;
- the idea of a "science-push", that is the assumption that a solid scientific basis, normally state-financed, is necessary for technological learning and that scientific knowledge by itself will push for technological changes; in many cases the scientific institutions do research but do not transfer technology because the state system does not give incentives in that direction;
- the transfer of a model of cooperation between producer and technology institutes, successful in a specific setting, to completely different economic and technological conditions.

**Environmentally sound technology** cannot be clearly separated from other technology. This might only be possible in the case of pure end-of-pipe-technologies. In most of the cases, the reduction of emissions will not be realised through the employment of "environmental" technologies, but by

- making sound decisions between two or more production processes with different degrees of impact on GHG emissions;
- the optimisation of a production technology concerning least GHG emissions.

Concerning the **discussion on technology issues** which traditionally has been concentrated on access to information and the international transfer of technology, the past provides **three lessons**:

- In practice, there seem to be few obstacles to the transfer of technology between a competent provider and a competent user. The number of cases where potential purchasers of licences or patents from developing countries have not been accepted by firms in developed countries is very limited. However, requirements and modalities applied to development assistance sometimes may have confronted developing countries with problems in absorbing technologies.

- Experience shows that most relevant technologies are in public domain and many are easy to implement. In addition, they are often low-cost, and since there is no prospect for any technological panacea in the future, there is no reason for any country to postpone cost-effective ("no regrets") opportunities to limit greenhouse gas emissions whilst awaiting better solutions.

- The transfer of technology and the strengthening of technological capacity are not alternatives but complementary processes: In many cases, transfer of technology has failed, because on the user side, but sometimes also on the supplier side, the technological capacity was lacking. Hence, much can be achieved through "soft" technologies, such as enhanced training, management and maintenance programmes, promoting both economic development and environmental improvement.

Hence, concerning technology cooperation with developing countries, the European Union is of the view that there should be drawn at **least one clear conclusion**: the strengthening of the technological capacity of developing countries is a precondition for their capacity to absorb and develop the technologies necessary for the effective implementation of the Convention, especially the reduction of greenhouse gas emissions. In all those countries where the development process was slow in the past, the lack of technological capacity has been identified as a major factor.

In the view of the European Union, the process of technology transfer and cooperation has to be supported by those institutions already existing in many countries in the field of technology advice. Their competencies would have to be complemented by climate-related and environment-related tasks and the respective knowledge. Non-governmental organisations, like business associations, will also have to play a greater role.

In the opinion of the European Union, the most important challenge will be to intensify the horizontal networking of institutions at the same level of intervention and the integration with their economic and socio-cultural environment, as well as the vertical networking which is the coordination and cooperation of projects at the national, regional or local level, aiming especially at strengthening the weak structures at the local level.

#### 4. ACTIVITIES WITH TECHNOLOGY TRANSFER COMPONENTS IN FAVOUR OF DEVELOPING COUNTRIES

In view of the limited funds available and in order to enhance technology transfer and cooperation, the European Union is of the opinion that a clear priority should be set where the demand for mitigation measures is most urgent. In addition, a concentration on three areas would be advisable, as indicated in Article 4.1 (c):

- industrial production, and the production and use of energy, where energy and industrial policy should prioritise the efficient use of resources and strengthening of the technological capacity;

- agriculture, that means the promotion of agricultural practices and systems with lower greenhouse gas emission levels, as well as forestry strategies which improve absorptive capacities;
- transport sector, where it is important to achieve an environmentally acceptable mix of transport systems and the optimum use of each of them.

## 5. ACTIVITIES CONCERNING COUNTRIES WITH ECONOMIES IN TRANSITION

The climate-related problems in countries with economies in transition (CET), but also in many developing countries with advanced industrialisation, are intrinsically interrelated with the general economic problems:

- resource-intensive production processes and goods, which have been stimulated by the lack of and, later on, distorted price signals; the main result of inefficient resource use is the high energy-intensity of production and consumption with the respective high levels of greenhouse gas emissions;
- a low efficiency and quality of industrial production in some areas, which influences negatively international competitiveness.

Hence, climate-related measures in countries with economies in transition cannot be separated from structural adjustment, especially

- a reform of the price system, which will stimulate the more efficient resource use;
- an increase in efficiency of industrial production and the generation of energy;
- a reduction of resource-intensity of consumption, especially with respect to heating.

The European Union believes that these measures require, above all, political decisions and consequently high investment, among others, in new, less contaminating and less energy-intensive production processes and machinery, improved energy production, heating systems and insulation of buildings, the rehabilitation of pipelines, railways and ship transport.

Some activities related to climate which are undertaken in the context of the implementation of the Convention are considered by the European Union to be of specific relevance for countries with economies in transition, although they may also be important for developing countries:

- strengthening of institutions which provide information and advice to firms, including small and medium scale industry; the private organisation of such services might be a precondition for the payment of adequate salaries and, in consequence, the quality of the service.

- strengthening of institutions with supervisory competences for industrial facilities etc. (emissions of industry and power stations etc.);
  
- strengthening of partnership arrangements or "teaming" between private firms; in the framework of *joint implementation*, for example, private firms would undertake investments which reduce greenhouse gas emissions and could contribute, at the same time, to avoid high costs of learning on the side of firms in countries in transition as well as in developing countries. Build-operate-transfer-arrangements (BOT) may also be of special interest for economies in transition, although they require quite a set of framework conditions.



**The transfer of energy efficient and other environmentally sound technologies to developing countries and Eastern-Central Europe, is therefore essential and urgent.**

**The developed countries should promote the transfer of technologies and adopt innovative instruments to finance the technology cooperation.**

The technology cooperation, according to the Business Council for Sustainable Development, is effective cooperation between business or industry parties which wish to do same for the purpose of business development.

**The governments and multilateral funds have to create the conditions for technology transfer and development, supporting the private initiatives, elaborating rules and introducing incentives.**

In this connection one interesting and useful way to follow could be the joint implementation mechanism to be established under the Framework Convention. At this time the negotiating Committee is deciding that joint implementation has to be used only to reduce CO<sub>2</sub> emissions and probably only between Annex I Parties. But this limitation does not take into account the fact that it could be possible that the most part of the developed countries will not be able even to stabilize their own CO<sub>2</sub> emissions by the year 2000.

**The developed countries with low CO<sub>2</sub> emissions should invest a lot of resources to stabilize their own emissions, meeting very high costs to reduce the marginal energy consumption.**

It could be therefore possible to examine the possibility, for the developed countries with national CO<sub>2</sub> emissions lower than 3% of the global CO<sub>2</sub> emissions, to stabilize their national emissions through technology cooperation with a developing country or an Eastern-Central European country.

**The investments in these countries could achieve far more substantial results at the same cost, and considerable amounts of energy could be saved in industrial, energy generation, transport system and service sectors.**

**In this way it will be possible to multiply the global effects of the resources finalized to the stabilization of low CO<sub>2</sub> emissions in a developed country.**

### **PAPER NO. 3: ITALY**

The Climate Change Convention emphasizes the role of environmentally sound energy technologies and technology cooperation to reduce greenhouse gas emissions.

**However, neither the Convention, nor the negotiations for the first Conference of the Parties (Berlin, March/April 1995), nor the GEF Council have settled the way to develop and deploy technologies and technology cooperation in meeting the Convention objectives: particularly the negotiations concerning financial mechanism and joint implementation have come to a deadlock.**

In fact, it seems that the negotiations for Berlin 1995 do not implement the Convention, but are only finalized to revise the commitments and the objectives.

Nevertheless, the Intergovernmental Panel on Climate Change confirms the trends of global warming, due to anthropogenic emissions of carbon dioxide and other greenhouse gases.

As everybody knows, carbon dioxide can be considered as an indicator for energy efficiency and air pollution, because low emissions correspond to low energy consumption and low air pollutants emissions.

**The environmental and energy saving measures introduced to date in the developed countries have reduced the energy consumption levels despite the continued growth of GNP.**

**Whereas, the rise of industrialization in developing countries (China, India, South-East Asia, Latin America) corresponds to the growth either of GNP or of energy consumption and air pollution levels.**

**The history of industrialization in the north could be repeated in developing countries, with very high risks for the global environment.**

**In Central and Eastern Europe the past and recent use of obsolete and low energy efficient technologies correspond – among other things – to high consumption and very high air pollution levels.**

**The situation is very clear, and shows which and where are the priorities.**

**The measures adopted (or to be adopted), and the environmentally sound/energy saving technologies introduced (or to be introduced) in the developed countries are not enough to prevent the climate changes: we cannot ignore mid and long-term problems, related to CO<sub>2</sub> increasing in developing countries and Eastern-Central Europe.**