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COMPILATION OF POSSIBLE ELEMENTS
FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE
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Note by the secretariat

Addendum 1

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Explanatory Notes

1. A number of submissions by delegations contained elements under the heading "General Obligations". These are included at the beginning of section I. A in their entirety, in order to preserve the integrity of these texts, even though part of the subject matter may relate to other parts of the compilation.
2. In some cases, material has been placed in the compilation according to indications given by the submitting delegation.
3. All elements relating to financial resources and transfer of technology have been listed in section I. B, to facilitate comparison among them. These texts are also relevant to section II. C of the compilation and are also reproduced there.
4. Three dots (...) appearing before and/or after a text indicate that this element has been separated from other provisions in the original text, which appear elsewhere in the compilation as appropriate.
5. In cases where texts appear relevant to more than one sub-section, the texts are quoted in one and cross referenced in the other(s).

E. COMPILATION

I TEXTS RELATED TO "COMMITMENTS"

- A. Texts related to "Appropriate commitments, beyond those required by existing agreements, for limiting and reducing net emissions of carbon dioxide and other greenhouse gases, on the protection, enhancement and increase of sinks and reservoirs, and in support of measures to counter the adverse effects of climate change, taking into account that contributions should be equitably differentiated according to countries' responsibilities and their level of development" (Decision 1/1, paragraph 6 (a))

Austria/Switzerland (Add. 1, p. 6)

General Obligations

1. Long Term Global Objective:

(a) Stabilization of greenhouse gas concentrations in the atmosphere at a level which minimises risks to ecosystems, ecological processes, and climatic conditions essential for the functioning of the biosphere and the sustainable development of societies and economies. [The question of quantification of stabilization levels will have to be elaborated further. In particular, a time horizon and mechanisms for defining and reviewing stabilization levels will have to be developed].

2. (b) Obligation to minimize adverse effects of global climate change. [Terminology to be defined in an article on the definitions]

3. Obligation to take appropriate action in pursuance of the long term global objective, on the basis of the Precautionary Principle.

As a first step:

(a) Stabilization of carbon dioxide emissions by industrialized countries at 1990 levels by the year 2000;

(b) Stabilization of carbon dioxide emissions by other countries at 1990 levels by a year to be agreed upon;

(c) Obligations should be equitably differentiated according to countries.

4. Obligation for the Parties to prepare, within a given time frame, national and/or regional programmes or strategies to combat global warming. At this point, it will have to be discussed whether policy instruments contained in these programmes or strategies should be further qualified, especially economic, fiscal and financial instruments.

5. Obligation to aim at energy conservation and rational use of energy and development of renewable energy sources.

6. Obligation to conduct environmental impact assessments in order to avoid taking measures which cause or could cause other adverse social and environmental effects and risks.
7. Obligation to refrain from subsidizing activities, inter alia, in the energy domain, which contribute to global warming.
8. Obligation to conserve natural carbon reservoirs and sinks and to develop integrated strategies to increase sinks.

...

China (Add. 4, p. 5, Article 3)

General Obligations

9. The Parties shall, in accordance with the means at their disposal and their capabilities:
 - (a) Co-operate by means of systematic observations, research and information exchange in order to better understand and assess the effects of human activities on climate and the environmental and socio-economic impact of climate change;
 - (b) Adopt appropriate legislative and administrative measures, and co-operate in harmonizing appropriate policies to address climate change;
 - (c) Co-operate effectively with competent international organizations to meet the objectives of the Convention;
 - (d) Encourage the promotion of public education and awareness of the environmental and socio-economic impacts of greenhouse gas emissions and of climate change and co-operate therein;
 - (e) Co-operate in development and application of relevant technologies.
10. The Parties undertake to ensure, through appropriate mechanisms, that Parties which are developing countries have access to the funds and relevant technologies and equipment necessary to combat the adverse effects of global climate change.

Netherlands Compilation (Add. 1, p. 29)

General obligations

Obligation to aim at energy conservation and rational use of energy and development of renewable energy sources. [criteria to be discussed].

11. Promoting efficient use of energy, development of lower and non-greenhouse gas emitting energy technologies and paying special attention to safe and clean new and renewable sources of energy.

United Kingdom Compilation (Add. 1, pp. 58-60)

General obligations

12. The Parties shall take appropriate measures in accordance with the provisions of this Convention and of those protocols in force to which they are party, to limit, reduce, modify and control human activities that result, or are likely to result, in adverse effects on the global climate.

13. To this end the Parties shall, in a spirit of good neighbourliness, within the means at their disposal and in accordance with their scientific and technical capabilities:

(a) Co-operate by means of systematic observations, research and information exchange in order better to understand and assess the effects of human activities on the global environment and the effects on human health, socio-economic conditions and the environment of changes in the global climate;

(b) Adopt and, where necessary, strengthen legislative or administrative measures and co-operate in formulating and harmonising appropriate policies and strategies to limit, reduce, adapt to and, as far as practicable, prevent climate change;

(c) Co-operate in the formulation of agreed measures, procedures and standards with a view to the adoption of protocols and annexes;

(d) Promote public education and awareness of the environmental and socio-economic impacts of climate change and, in particular, of emissions of greenhouse gases;

(e) Develop appropriate mechanisms for the purposes of providing financial and technical assistance, including the transfer of technologies, to facilitate the fulfilment by the developing countries of their obligations under this Convention and protocols to which they are party;

(f) Co-operate with competent international bodies to implement effectively this Convention and protocols to which they are party.

14. The provisions of this Convention shall in no way affect the right of parties to adopt in accordance with international law, domestic or international measures additional to those referred to in paragraphs 1 and 2 above (see paragraphs 12 and 13), nor shall they affect additional domestic or international measures already taken, or entered into, by a Party, provided that those measures are compatible with their obligations under this Convention and any protocol to which they are party.

15. The Parties shall, in taking the measures referred to in paragraph 1 (see paragraph 12) above, ensure that the implementation of these measures does not result in the creation of other types of environmental degradation.

United Kingdom (Add. 1, p. 84)

General obligations

The Convention should contain the following general obligations in addition to those set out in the common elements text.

16. To undertake co-ordinated action with the ultimate global objective of stabilizing the climate change effect of greenhouse gases at a level which would prevent dangerous anthropogenic interference with the climate.
17. To adopt, as quickly as possible, measures which will have the effect of limiting emissions of greenhouse gases and which are beneficial for reasons other than climate change and justified in economic terms.
18. To encourage, taking into account the particular needs of developing countries, the development and rapid diffusion of technologies, best practice, training and other skills which could contribute to the control and limitation of greenhouse gas emissions and the protection and enhancement of sinks for greenhouse gases.

United States of America (Add. 1, pp. 91-93)

General obligations

19. The framework convention should provide mechanisms for developing the scientific, technical, economic and environmental bases for formulating and implementing, as appropriate, measures to address the potential modification of climate caused by greenhouse gases and the possible adverse impacts therefrom. It should require the Parties to develop and pursue, in accordance with the provisions of the convention and to the extent deemed desirable in light of the scientific, technical, economic, and environmental bases outlined above, appropriate measures that prevent, limit, reduce, or facilitate adaptation to climate change. The Parties, in developing and taking such measures, should address the net emissions of all greenhouse gases and their precursors comprehensively, taking into account the best available greenhouse warming potential index ("GWP") and other environmental impacts of the gases. The framework convention should enable the Parties to fashion economically efficient and effective implementation, including through the use of cooperative arrangements. It should also recognize and encourage actions taken by nations that help address climate change, including national actions and actions under other international agreements.
20. To these ends, the Parties should:
 - (a) Co-operate in systematic observations, research and information exchange to better monitor, understand, and predict changes in the global climate, their impacts, potential responses thereto and the costs and benefits of such responses;
 - (b) Adopt measures which are justified for a variety of reasons, and which also have the effect of limiting or adapting to any adverse effect of climate change.

(c) Develop and make public national inventories of net emissions, using an agreed methodology that is developed in light of the work of the IPCC.

(d) Establish national strategies to address and facilitate mitigation of and adaptation to climate change and make public an accounting of the elements of such strategy and their effect on net emission.

(e) Base any additional responses on thorough assessments, by the IPCC and other competent international bodies, of climate change and potential responses to that change;

(f) Co-operate in promoting public awareness of climate change;

(g) Encourage the development and transfer of relevant technologies, as well as the provision of technical and financial assistance, to facilitate the fulfilment by the developing countries of their obligations;

(h) Co-operate with competent international bodies.

21. The article on general obligations should include a provision in which the Parties agree that, in developing and implementing measures pursuant to the convention or any subsidiary instrument, they should take into account other types of environmental impacts that such measures could have. In addition, the convention should provide the opportunity for Parties to meet their obligations under the convention and any subsidiary instrument through bilateral, multilateral or regional cooperative arrangements. The convention and subsidiary instruments should also recognize and count the effect on net greenhouse gas emissions of relevant actions taken under national policy and other international agreements.

Austria/Switzerland (Add. 1, p. 9)

Protocols/Annexes

...
22. Protocols/Annexes on programmes for actions setting targets for the limitation and/or reduction of net greenhouse gas emissions, in particular CO₂, might cover the following issues:

(a) Emissions of CO₂ and/or other greenhouse gases including funding mechanisms;

(b) Sustainable forest management/reforestation/afforestation, including funding mechanisms;

...

France (Add. 1, pp. 10-14)

General considerations

23. The conclusions of IPCC, corroborated by the work of the French Academy of Science, recommend:

- The limitation of the climate change now under way by stabilizing the radiating effect of human emissions of greenhouse gases (CO₂, N₂O, CH₄, CFC and HFA) or of gases contributing indirectly to the greenhouse effect (CO, NO_x, HC).
- Immediate adoption of measures to prevent the consequences of climate change. In this respect, prevention measures will be all the less costly because they will have been decided on in time.

24. A world-wide strategy must be initiated as soon as possible because the reduction of greenhouse gases by only a few States will not suffice. This strategy must be based on action principles.

...

Elaboration and follow-up of strategies

25. The convention should allow the elaboration by States or international organizations of strategies or programmes of action endorsing the objectives adopted and the means chosen. The convention should provide a general framework for the elaboration of such strategies.

26. These national reports might contain a list of the emissions of greenhouse gases, the internal measures taken to reduce them and the results obtained; they will make it possible to verify the fulfilment of the commitments undertaken and to facilitate the harmonization of measures.

27. These reports will be published and communicated to the parties within the framework of a follow-up mechanism and may give rise to discussion and comments and public evaluations.

Establishment of limitation objectives

28. All gas emissions which contribute to the greenhouse effect should be limited but carbon dioxide deserves special attention because of the juxtaposition within it of four specific characteristics:

- it is mainly responsible for the additional anthropogenic greenhouse effect;
- it remains for a very long time in the atmosphere once it has been emitted and this period becomes still longer as a result of the weakening of the ocean's role as a sink and as the warming effect increases;
- it requires important structural modifications in our economies, harmonized at the international level, in order to prevent carbonic emissions as distinct from other gases;
- the quantities of CO₂ fossil emissions are the best known. Their control today is the only one practicable, in the same way as CFC emissions.

29. Thus, even if the negotiations must take into account all the gases contributing to the greenhouse effect, it is inappropriate to seek to negotiate a global objective for the limitation of emissions, without running the risk of failing to adopt specific short-term commitments.

In the following paragraphs we shall deal with the limitation of CO2 emissions of fossil origin.

30. While the establishment of objectives cannot of itself produce all the actions necessary for the campaign against the greenhouse effect, it will signify the political will of States to take appropriate measures and will define the ultimate aim which we must pursue.

31. These objectives will be established over two time-frames:

- A long-term common objective whose aim would be to stabilize the concentration of greenhouse gases in the atmosphere.

For CO2, this objective must be formulated on the premise that emissions from States will converge at a common level expressed in tons per inhabitant.

It would correspond, according to the IPCC studies, to an overall reduction of more than 50 per cent compared to present global emissions, i.e. 0.35 of a ton of carbon per inhabitant per year by 2030.

It reflects the idea that it is possible to obtain comparable results from every nation in energy efficiency or alternative energy substitutes for fossil energies, since a certain time period is stipulated for the implementation of the necessary adjustments. Conversely, it reflects the idea that it is unrealistic to think that every nation can reduce its emissions by the same percentage, even if that weakens the principle of equity recalled in the preamble.

In order to take into account past efforts, the room for manoeuvre that still exists and predictable future trends, the target should be expressed in absolute terms and not in relative terms with respect to a level of emission in an arbitrarily selected year.

- A short term objective: Establishing a short-term objective with respect to CO2 (by the year 2000) should result in the formulation of a first set of commitments by industrialized countries along the lines of the Luxembourg Declaration (October 1990) and the Ministerial Declaration of the Second World Climate Conference (November 1990).

This short-term objective will demonstrate the political will of industrialized countries to combat the greenhouse effect and may take the form of limitation objectives at a given level of emission, depending on the situation of each country.

32. France, which has already reduced its CO2 emissions by nearly 30 per cent since 1980 is prepared, for its part, to set itself a national stabilization target by the year 2000 at a level below two tons per inhabitant per year, provided that major industrialized countries take a similar approach.

33. The possibility of regional accords must be recognized, through which, if need be, the measures taken can be optimized economically. The European Community should thus be considered in its entirety.

34. From developing countries, for example, such commitments as improved energy efficiency, and more particularly CO2 efficiency, will be sought with concomitant financing.

Adoption of harmonized instruments

35. It is commonly acknowledged that CO2 emissions reduction requires "tough" policies at yet undetermined costs, particularly since the objectives established must be ambitious in order to meet the objective of stabilizing the warming effect.

36. In this context, countries cannot undertake commitments unless they are assured that the actions decided will not create situations in which competition is distorted.

37. International harmonization of the economic and regulatory measures to be taken is essential even if certain countries are penalized at the expense of others.

38. It is therefore important that the convention define these principles, establish guidelines and define phases.

39. As recommended in the final IPCC report, countries must initially consider the subsidies and tax incentives which favour the energy and greenhouse gas producing sectors. France for its part, believes that such an analysis would bring about the rapid disappearance of fossil energy subsidies.

40. Industrialized countries should institute within their national tax systems a graduated surtax on fossil energy at a uniform rate to cover the external costs of the greenhouse effect. This tax would be applied in the industrialized countries under conditions which would avoid both distortions in competition and the dislocation of industrial sites.

41. The implementation of actions designed to reduce CO2 emissions will be the natural corollary of the signal sent by this pricing. It cannot in itself build a genuine market for energy efficiency. Reaction to the price must be accompanied by the simultaneous implementation of the following actions:

- (a) Introduction of harmonized incentives or regulatory measures in areas of industry, transport and construction.
- (b) Emergence of a co-ordinated international effort for technological developments in energy management.

See French submission under II. A (France Addendum (A/AC.237/Misc.1/Add. 2, pp. 5-9)).

Germany (Add. 1, pp. 17-21)

42. The Contracting Parties should commit themselves to undertake without delay and in the interest of precaution, on the basis of the best available technology, suitable measures:

- (a) for the effective limitation/reduction of emissions of anthropogenic climate-related gases, in particular CO₂, CH₄, N₂O and NO₂, CO and VOC as precursors of tropospheric ozone;
- (b) for the conservation and creation of CO₂ reservoirs and sinks, as well as
- (c) to develop strategies and measures to adapt to changes in the climate and to reduce climate-related damage.

43. The various countries' share of reduction respectively degree of limitation in climate-relevant emissions as well as the provisions for the conservation and creation of CO₂ reservoirs and sinks are to be determined by a scheme which takes into account the major criteria. Account is to be taken of the economic and social development of each individual country.

44. The Contracting Parties should commit themselves to carry out the measures to limit and reduce emissions of anthropogenic climate-relevant gases in such a way that

- (a) the global energy-related, climate-relevant emissions of in particular carbon dioxide (CO₂), methane (CH₄), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) as precursors of tropospheric ozone are considerably reduced.

This requires:

- a stabilization of the global energy-related CO₂ emissions at their 1990 level by the year 2000 and first steps towards their reduction in the years 2005 and 2010 as well as
- a definition of the objectives and measures to reduce and limit further energy-related emissions, in particular CH₄, NO_x, CO and VOC emissions.

This requires immediate and drastic measures on the part of the developed countries in order to stabilize and reduce their emissions.

Countries which until now have had a relatively low energy consumption and thus low emissions, but which will continue to grow because of their economic and social situation can set appropriate objectives and strategies for their development. They ought, however, to play their part in limiting the increase of emissions by accepting the obligation to strive for more efficient energy use in their economic activity and thus for a limitation of emissions.

(b) emissions are to be limited and reduced in the following areas:

- the use of fossil fuels in the combustion process;
- in the preceding processes, particularly in methane emissions from coal mining (mine gas), oil extraction, the extraction of natural gas and leakages during the transportation and distribution of natural gas;
- measures to reduce energy use in the final consumption process, i.e. domestic use, small-scale use, industry, traffic and transport;
- as well as measures in the area of waste/garbage/recycling;

Measures are in future taken both in the developed and - adjusted to their respective circumstances - the developing countries to reduce and/or limit emissions of climate-relevant trace gases, initially in particular in view of more rational energy generation and use, energy saving as well as increased use of renewable energy sources.

(c) further climate-relevant emissions, in particular CH₄ and N₂O emissions from agriculture are to be limited and reduced.

45. With regard to the conservation and creation of CO₂ reservoirs and sinks, the Contracting Parties should commit themselves within the framework of the convention

- (a) to conserve their forests as extensively as possible in their best possible structure by counteracting the causes of the threat posed to them i.e. the emission of pollutants or environmentally damaging use;
- (b) to set differentiated objectives and measures to reduce the annual deforestation rate with a view to ending forest destruction completely;
- (c) to carry out site-based afforestation and regeneration measures in order to create additional forests as CO₂ sinks and to improve the CO₂ binding process in existing forests.
- (d) to quantify the forest area required for reasons of climate protection and to use this figure as an objective for all activities in the field of forest conservation and afforestation;
- (e) to develop measures with regard to further CO₂ sinks and reservoirs (in particular oceans and seas).

46. The Contracting Parties should commit themselves to develop strategies and measures to adjust to changes in the climate and to reduce climate-related damage. This includes in particular strategies and measures in the fields of coastal protection, agriculture, nature conservation, soil conservation, water protection, protection of human settlement, etc.

47. The Contracting Parties should commit themselves to drawing up protocols to develop further the obligations on:

- reduction and limitation of climate-relevant emissions,
- the conservation and creation of CO₂ reservoirs and sinks and
- the adjustment to climate change and the prevention and containment of climate-related damage.

These protocols are to put the necessary measures on a more concrete footing.

48. The Contracting Parties shall use means and instruments of their choice to implement measures to comply with their obligations in line with this Convention and its protocols.

49. The Contracting Parties shall ensure that the measures they take do not lead to any unacceptable ecological or social damage and at the same time as far as possible reduce and/or minimise further adverse consequences and risks. The Contracting Parties are to assess the environmental impact of the measures to be taken.

India (Add. 3, pp. 4-5)

Commitments

50. The Parties agree to cooperate by means of systematic and sustained research and information exchanges in order to better understand the causes and impacts of climate change and the response strategies required to deal with such change.

51. The Parties agree to work towards a common long-term objective of stabilizing the concentration of greenhouse gases in the atmosphere, at an appropriate level to be agreed upon in the light of future scientific findings, and on the basis of an equitable formula requiring, inter alia, that anthropogenic emissions of carbon dioxide from States should converge at a common per capita level, and which would take into account net carbon dioxide emissions during this century.

52. Developed country Parties shall, as immediate measures: (a) declare, adopt and implement national strategies to stabilize and reduce their per capita emissions of greenhouse gases, particularly carbon dioxide; stabilization of emissions of greenhouse gases other than those controlled by the Montreal Protocol, particularly carbon dioxide, should be achieved by the developed countries Parties at the latest by the year 2000 and should be set at 1990 emission levels, with the goal of achieving at least a (20%) (30%) (40%) (50%) reduction on these stabilized levels by the year 2005;

...

53. Developing country Parties may, in accordance with their national development plans, priorities and objectives, consider feasible measures with regard to climate change provided that the full incremental costs involved are met by provision of new and additional financial resources from the developed countries Parties.

Japan (Add. 7, p. 3)

Pledge

54. Each country (or regional group) makes public a pledge, consisting of its past performance strategies to limit greenhouse gas emissions and targets or estimates for such emissions as the result of the strategies.

- (1) Participating countries (or regional groups) must make pledges as soon as possible (within three months) after the ratification (entry into force) of the Convention. The pledges will be made public as soon as possible.
- (2) The pledges should include concrete response measures to be taken in each sector, e.g. energy, industry, agriculture, forestry, etc.
- (3) Regional pledges by regional groups must, in principle, be accompanied by subpledges of each country.
- (4) Necessary technical and procedural matters, etc., for the pledging should be spelled out in the Convention or an annex of the Convention.

See section II. B for elements on "Review".

Kuwait, Saudi Arabia, USSR (Add. 9, p. 3)

55. We recommend that in the elaboration of response strategies, over time, all greenhouse gases, sources and sinks be considered in the most comprehensive manner possible and also that limitation and adaptation measures be addressed.

Malaysia/Malta (Add. 1, p. 24)

Annexes

56. There could be two annexes establishing appropriate commitments in the following area(s): for the limitation, stabilization and reduction of anthropogenic concentrations of carbon dioxide in the atmosphere, including the protection, enhancement and increase of sinks and systematic monitoring and research.

...

Netherlands Compilation (Add. 1, p. 33)

Sustainable forest management, reduction of deforestation, and afforestation

57. Sustainable forest management practices and agricultural techniques which reduce greenhouse gas emissions.

Preparation for anticipated climate change

58. Coping with negative impacts due to sea level rise resulting from climate change caused by man made activities.

Netherlands Compilation (Add. 1, p. 41, Annex 1)

Main elements for inclusion in a Protocol
concerning the control of GHG-emissions

(Suggested by the Netherlands delegation)

59. We prefer a Protocol concerning the control of GHG-emissions.

Theoretically a comprehensive approach of the GHGs, CO₂, CH₄, N₂O, tropospheric ozone, CFCs and halons would be preferable. However, the control of the emission of CFCs and halons is being dealt with in the Montreal Protocol. Of the remaining GHGs, our knowledge concerning CO₂ is largest at present. Therefore concrete agreements concerning CO₂ are necessary now. This approach would make it possible to adopt a different approach, if required, for the GHGs not controlled by the Montreal Protocol.

60. Our aim is to agree on a concrete reduction of the CO₂ emission in a subsequent phase. Moreover it is important that in a next phase we start with controlling the other GHGs not controlled by the Montreal Protocol (e.g. to start with a stabilization of the emission of CH₄ and N₂O for highly industrialized countries).

Protocol concerning the control of GHG-emissions

61. - The lack of scientific proof should be no reason to postpone measures. "Action now", referring to the Bergen Conference and the SWCC Precautionary Principle. (cost-effective measures, taking into account the different socio-economic consequences).

62. - Introduction of the principle of exchange between different GHGs (in CO₂-equivalents) "in order to allow flexibility while still achieving overall improvement". Elaboration however at a later stage.

63. - The ultimate target:
Stabilization of GHG-concentrations at such a level that a dangerous impact on climate can be avoided;
Acceptation of the principle of a long-term quality target for the climate.

64. - Preliminary target:
Temperature increase: < 0.2 degr. C per decade, max. 2 degr. C above preindustrial,
SLR: < 0.05 m per decade, max 0.5 m,
GHG-concentration well below a CO₂-equivalent doubling.

65. - Recognize that further elaboration is required.

66. - Formulation as soon as possible of GHG-emission targets.

67. - Acceptation of the principle of a differential approach:
Differentiated commitments of e.g. industrialized and developing countries.
68. - Adoption of a phased/differentiated approach.
69. - During the first phase a CO₂ stabilization target:
Stabilization in the year 2000 at 1990-level, on the basis of the principle of burden sharing.
70. - During the next phase a CO₂-reduction target:
Further reduction in the year 2010 at 1990 level.
71. - An emission target for CH₄ and N₂O in highly industrialized countries (stabilization as a first step).
72. - Adopt a paragraph in the protocol that e.g. in 1995 an additional Protocol be negotiated on CO₂ reduction targets.

Netherlands Compilation (Add. 1, p. 43, Annex 2)

Main elements for a protocol on forests

(Suggested by the Netherlands delegation)

73. Each country or group of countries should set in or before 1995 a target for the permanently absorbed amount of CO₂ in forests and trees. This target should be reached by the year 2050 using a step by step approach, taking into account:

- a reference year (e.g. 1990),
- the overall CO₂ target,
- other relevant measures concerning CO₂ and the forestry situation and perspectives.

74. Each country should fix the amount of CO₂ that is absorbed in forests in the reference year (1990). This should be accomplished within a certain time frame (e.g., by 1995).

75. The CO₂-target concerning the absorption in forests should be "translated" into country targets in relation to the surface area and quality of the forests. These tasks should be accomplished by the year 2000.

76. In the interim, (until 2000) countries should aim at:

- the conservation of existing forests,
- the provision of afforestation when such conservation is not possible,
- the improvement of forest management in relation to CO₂ absorption.

77. This will require:

- provisions (preferably through existing organizations and fora) on monitoring, verification and coordination,
- a monitoring system for the surface area and quality of forests,
- research on the absorption of CO₂ by various types of forests,
- financial resources for research and the facilitation of the implementation measures under (2) and (3) (see paragraphs 74 and 75 above).
- a financial mechanism to compensate for the incentives taken by countries which are particularly active (through grants or through tradeable CO₂ emission rights).

Norway (Add. 2, pp. 12-14)

Objectives, targets and commitments in a Climate Convention

Cost of measures to counter and adapt to climate change

78. The possible ecological, social and economic effects of climate change will depend on a number of factors and may be difficult to quantify. The mobility of ecosystems in response to movements of temperature zones, and the vulnerability of low lying and arid areas will be important for the ecological effects. The impacts on agriculture, forestry, fisheries and on the need for relocation of population, industry and infrastructure will have crucial socio-economic consequences.

79. It is reasonable to assume that minor changes in temperature will have moderate impacts and that total costs will grow increasingly higher as temperature change increases. So far, we have no detailed information on how total impact may depend on the change in temperature, partly due to the lack of reliable regional estimates.

80. There have been some efforts to estimate levels of temperature change beyond which the risks of severe damages might be expected to increase rapidly. On the basis of research done so far, the UNEP/WMO/ICSU Advisory group on Greenhouse gases has stated that a rate of mean global temperature rise of 0.1 degree/decade, and an absolute rise of between 1 and 2 degrees above preindustrial mean temperature, might be a significant level.

81. The social and economic consequences of various abatement measures, such as emission reduction and sink enhancement may vary greatly. Some of these are "no-regrets" measures. Due to economic or other environmental reasons, such measures are justifiable in their own right. Other measures entail social and economic costs. For small limitations in emission patterns, the costs might be modest. On the other hand OECD studies imply that global stabilisation of net emissions in the long run might entail costs amounting to 2-5% of world GDP. If emission targets grow more ambitious over time, costs are expected to escalate rapidly.

82. Countries will have to consider various measures to adapt to climate change. This could include reducing vulnerability to sea level rise by building dikes and dams, changes in land use and agricultural policies and relocation of industries and populations.

83. The costs of adaptation may vary greatly between countries. Given a gradual implementation, the costs of adaptation policies may be fairly modest. An OECD report on potential costs of adapting to sea level rise of one meter indicates total costs to be in the order of 0,1% of GNP within the OECD countries. For vulnerable regions adaptation costs may be very substantial. For some countries complete adaptation may not be possible. In the absence of effective adaptation measures the IPCC has estimated that some island countries and 10 - 15% of the area of certain countries with large river deltas may be flooded.

84. There remain a number of major uncertainties regarding the possible extent as well as the effects of climate change, including potential socioeconomic costs, and the costs of abatement and adaptation measures. The question of how to handle this uncertainty and the development of "insurance policies" based on the precautionary principle will be essential in the development of efficient climate policies.

85. At this stage, research to reduce uncertainty about the extent, as well as the socioeconomic costs of climate change and policy measures should be given high priority. In addition, a balanced mix of adaptation and abatement policies should be pursued. The level and strength of climate policy targets should fully reflect the current state of risks and uncertainties and their expected resolution over time. Climate targets should at all times be based on the best available knowledge regarding the balance between possible damages, abatement costs and adaptation costs, and be revised at regular intervals.

Objectives, targets and commitments

86. The long-term objective in the initial framework convention on climate change should be of a general, qualitative nature. It should be linked to the major determinants for climate change, as well as the need to develop international co-operation to respond effectively to this challenge.

87. To achieve these objectives, it must be recognized that climate change is a global challenge that requires global participation. An environmentally efficient and cost-effective climate regime therefore requires short-term emission targets set at the global level.

88. Commitments by countries to meet long term global objectives and short term targets should be based on the principle of equity and the common but differentiated responsibility of countries. Therefore, groups of countries at different levels of economic development should take on different emission control commitments.

89. The short-term commitment for OECD countries should be stabilization of greenhouse gas emissions, excluding the requirements under the Montreal Protocol, at 1989 levels by 2000. Groups of non-OECD countries could take on commitments that are consistent with their economic circumstances and development needs as well as the long-term objectives of the convention.

Norway (Add. 2, p. 20)

Mechanisms to allocate and implement objectives, targets and commitments

Conclusions

90. The negotiation of an effective climate agreement will be a lengthy process. The initial agreement should be process-oriented and thus have a structure that facilitates timely revision of current elements and inclusion of new elements.

91. The climate agreement should aim at universal participation. The special circumstances of certain countries should, to the largest degree possible, be handled as an integral part of the climate agreement.

92. The initial framework convention should initiate the process towards harmonization of greenhouse gas taxes and other appropriate mechanisms in the participating countries, for instance through a set of minimum tax levels. It should contain commitments to avoid unfair trade effects.

93. The allocation of initial net emission commitments between countries at different levels of economic development could be based primarily on equity grounds. This implies that the most developed countries take on the largest commitments. Initial targets for developing countries and countries with economies in transition should be of a kind consistent with their economic situation and development needs.

94. The allocation of initial commitments between countries at the same level of economic development should be based on both equity and cost-effectiveness. This implies that countries with high emissions, where the cost of emission reductions are comparatively low, take on the largest commitments.

95. Countries should have the option to achieve quantitative emission commitments alone or in co-operation with other countries. The framework convention should initiate the process towards the establishment of a clearing house system. This would facilitate transfer of financial resources to the developing countries and countries with economies in transition and contribute to a cost-effective allocation of net emission reductions on a global basis.

Republic of Korea (Add. 1, p. 51)

96. Taking into account the fact that the developed countries are responsible for a major part of emissions of greenhouse gases, actions aimed at stabilizing emissions of greenhouse gases should be initiated by the developed countries, and the difficulties of the developing countries in stabilizing their emissions of greenhouse gases should be fully considered, because their energy consumption will continue to increase in parallel with their economic growth.

Singapore (Add. 7, p. 6)

Specific commitments on emissions, sinks and counter measures

97. In the examination of remedial measures, special consideration should be given to countries which are not in a position to use substitutes for fossil fuel, or do not possess the flexibility to switch to non-fossil fuels such as hydroelectric, geothermal, nuclear and wind power, taking into account the prevailing state of technology and levels of attainable efficiency in fossil fuel usage.

Sweden (Add. 6, pp. 3-5)

98. The framework convention must in one or the other form contain commitments on limitation of emissions, in particular of CO₂. A practical approach to this issue has to integrate two principles:

- early action of a concrete nature in limited but important areas.
- a phased approach, enabling countries to take on more and more demanding commitments gradually.

99. For the purpose of such an approach, countries can be divided into categories with mechanisms for the transfer from one category to another when countries are able to take on more demanding commitments. We believe that a number of categories are needed, perhaps 5-6, to take into account different circumstances in different groups of countries (e.g. OECD-countries, countries with economies in transition, developing countries with a substantial industrial sector, other developing countries, countries in special conditions such as small island states ...).

Countries can be divided into categories according to appropriate criteria which would be decided by the Parties and included in the Agreement.

100. We are aware that a number of points, such as the definition criteria, should be further elaborated and would appreciate any comments from delegations.

101. This paper only deals with commitments on limitations of emissions, which does not exclude that other measures, such as those related to sinks, could also be incorporated in this kind of approach.

102. In the convention, such commitments in different categories might be expressed as follows:

103. For the purpose of the following paragraphs, the Parties are divided into categories ()-() according to the criteria set out in Annex ... (to be developed):

104. The Parties in all categories shall, in accordance with Chapter IX, Article ..., submit public national reports including an emission inventory and a national strategy to combat the greenhouse effect.

105. The parties in all categories shall use their best efforts in limiting emissions of greenhouse gases from, in particular, energy, transport, agriculture, industrial processes, landfills and from the extraction and transport of fossil fuels. They shall base their actions on best available technology and practices.

106. The Parties in category ()-() shall implement, inter alia, the following policy measures or similar measures with the same effect, not later than five years from the entry into force of this Agreement:

- (a) Mandatory fuel efficiency standards for fossil fueled motor vehicles. Such standards shall aim at reducing the average new vehicle's emission of CO₂ by the year (2000) compared to 1992 with at least 20% for passenger cars, 15% for light duty trucks and 10% for heavy duty vehicles. They shall as a minimum correspond to the values set out in Annex ... (to be developed).
- (b) Measures to encourage the introduction and widespread use of non-fossil fuels in the road transportation sector.
- (c) Mandatory energy efficiency standards for space heating boilers, electric and gas water heaters, stoves, cookers, refrigerators, freezers and air conditioning devices. Such standards shall as a minimum correspond to the values set out in Annex ... (to be developed).

107. Other Parties shall implement these measures not later than five years after entering category ()-().

108. The Parties in category ()-() shall also implement the following policy measures, or similar measures with the same effect, not later than five years from the entry into force of this Agreement:

- (a) Taxation of fossil fuels according to their carbon content. These taxes or other economic instruments with the same effect shall by the year (2000) as a minimum corresponding to \$xx per ton of CO₂ emitted. Bunker oils and aircraft fuels shall be included in this taxation.
- (b) Reduction of subsidies for the production and use of fossil fuels with a view to abolish such subsidies at the latest by the year (2000).

109. Other Parties shall implement these measures not later than five years after entering category ()-().

110. (Quantitative commitments on stabilization/reduction of CO₂ emissions by countries in certain categories could also be included in a phased approach, with mechanisms for phasing-in of new countries as they enter into these categories).

111. The Parties shall, not later than three years from the entry into force of this Agreement and in accordance with the procedures set out in Chapter X, report on their national implementation of the commitments in the preceding paragraphs.

United Kingdom (Add. 1, pp. 85-86)

Specific obligations

112. All States should commit themselves to preparing, and submitting to the Secretariat, national targets or strategies which will limit emissions of greenhouse gases and protect and enhance sinks for greenhouse gases. These should describe:

- (a) current levels and sources of greenhouse gas emissions;
- (b) projected future levels of greenhouse gas emissions;
- (c) current forest areas;
- (d) estimated future forest areas;
- (e) the measures already in hand to control emissions of greenhouse gases and protect and enhance sinks and reservoirs;
- (f) potential and/or planned additional measures in these regards;
- (g) the likely impact that these measures will have on future levels of emissions of greenhouse gases and forest areas and other sinks and reservoirs, and their cost effectiveness.

113. Developed countries should undertake to provide such strategies to the secretariat one year after entry into force of this Convention for them. Developing countries should undertake to do so within two years. Developed countries should commit themselves to cooperating with developing countries on the preparation of such strategies through the provision of financial and technical assistance.

114. In formulating these strategies developed countries should agree to take as a guideline that stabilization of greenhouse gas emissions should be achieved by them as soon as possible. For CO₂, stabilization of emissions should be achieved by them as soon as possible, in general at present levels.

115. Developing countries should agree to take as a guideline that they will keep future net growth of greenhouse gas emissions to the lowest level possible, having due regard to their development requirements and their capabilities.

116. The more specific obligations which countries will enter into shall be elaborated in protocols to this Convention.

117. Parties will ensure that the measures they take, as described in their national strategies are consistent with the obligations of other relevant international instruments and do not serve to introduce trade barriers between Parties to this Convention.

118. To help developing countries to meet the incremental costs required to achieve further limitation of greenhouse gas emissions, and to help them meet their specific obligations under the Convention, developed countries agree to mobilize financial resources for developing countries through the Global Environment Facility of the World Bank/UNEP/UNDP and to take steps to improve the speed and diffusion to developing countries of environmentally sound technologies on a fair and most favourable basis (SWCC).

118. All States undertake to promote the protection and enhancement of sinks and reservoirs for greenhouse gases. In particular, States agree to set appropriate national forestation targets which take account of their different circumstances and comprise targets for the maintenance of existing forest area or re and afforestation.

119. Developed countries commit themselves to support the actions of developing countries to protect and enhance sinks and reservoirs through technical and financial co-operation.

...

United States of America (Add. 1, p. 94)

Assessment and consideration of response measures

120. Specific commitments for emissions reductions should not be included in the framework convention because of the need for flexibility in nations' choices of their own measures. Further, there is a real need for further analysis of the costs and benefits of international responses, at the same time that prudent steps may be taken by nations even in the face of great uncertainty. Accordingly, the framework convention should include an article on assessment and response measures that is modelled on Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer and that requires the Parties to periodically assess the available scientific, technical, and economic information with respect to:

- (a) greenhouse gases and their precursors and their effects on climate;
- (b) the possible impact of such effects; and
- (c) possible response measures that could be taken at the national, regional, and/or international levels.

121. As part of this work, the parties should be required, as necessary, to update and to make public, using a standardized methodology developed in light of the work of the IPCC and other competent international bodies, national inventories of all sources and sinks of greenhouse gases and their precursors.

122. In light of this work, the Parties would be obligated:

- (a) to update national, regional, and international strategies and policies to limit, reduce, facilitate adaptation to, and as far as appropriate, to prevent the adverse impacts of climate change, in accordance with the provisions of the convention and any subsidiary instrument;
- (b) to update programs for research, systematic observation, information exchange and the development and transfer of technology and knowledge;
- (c) to consider and undertake any additional action that may be appropriate in light of the purposes of the convention.

123. In the assessment and consideration of response measures, and in particular, in the development of national, regional and international response strategies, the Parties should take into account the best available GWP. In addition, the Parties should consider, in consultation with the IPCC and other relevant international bodies, whether the GWP should be revised at some future date.

Vanuatu (Add. 3, pp. 25-27)

International and regional co-operation

General objectives

124. The Parties shall take all necessary measures in accordance with the terms of this Convention to ensure that human activities within their jurisdiction or control do not contribute to climate change.

125. This Convention shall in no way affect the right of parties to adopt measures which go beyond its terms.

General obligation of international co-operation

126. Undertaking to co-operate with (i) other parties and (ii) the relevant competent international institutions to ensure:

- effective implementation of the convention
- sharing information
- monitoring and observation
- research into relevant areas
- implementation.

Development of improved regional co-operation

127. Recognition that the impact of climate change will differ from region to region.

128. Development of regional response strategies promoting regional co-operation in relation to inter alia, research, monitoring and observation implementation.

...

National Inventories

129. The Parties agree to compile information on activities within their jurisdiction or control which affect, or are likely to affect climate, in accordance with (specified criteria).

130. This information must be submitted to (appropriate international body) within six months of the deposit of the instrument which ratifies this convention.

131. Annual Reports will be submitted to the (appropriate international body) thereafter.

132. Information contained within National Inventories may be disseminated in accordance with the terms of Article 10 (see Section II B).

Vanuatu (Add. 3, pp. 28-31)

National climate plans

133. The Parties shall draw up specific action plans on the basis of the information submitted pursuant to Article 12 (see paragraphs 129 to 132 above) to reduce the effect of human activities on climate with the objective of achieving the goals set out in this Convention.

134. Plans to cover (period) – to be submitted to (the appropriate international body) within (one year of ratification) and then annually.

Specific obligations

Greenhouse gases: general obligations

135. The Parties undertake to stabilize atmospheric concentrations of Greenhouse Gases at (specified level) by (date).

136. Action taken to control the effects of human activity on climate must not have any consequential effects which are damaging to the environment.

137. Immediate action shall be taken in accordance with the Annexes to this Convention. The Annexes do not preclude the negotiation of specific protocols dealing with the same topics. [Annexes to be decided upon].

Emissions

138. To achieve the objectives of this Convention, especially those stated in Article 15 (see paragraphs 135 to 137 above), the Parties agree to reduce anthropogenic emissions of Greenhouse Gases by taking immediate action in accordance with Annex 1.

Sinks/reservoirs

139. To achieve the objectives of this Convention, especially those stated in Article 15 (see paragraphs 135 to 137 above), the Parties agree to preserve protect and enhance Sinks of Greenhouse Gases taking immediate action in accordance with Annex 2.

140. Without prejudice to the development requirements of developing countries, action to be taken in relation to sinks will include appropriate commitments on the preservation of bio-diversity.

Measures to counter the consequences of climate change

141. Development of national coastal zone management plans to identify coastal areas at risk and deal with sea level rise in such a way that danger to populations is minimized and ecosystems are protected.

142. Development of emergency procedures and coastal zone response mechanisms to reduce vulnerability to coastal storms.

143. Development of a global ocean-observing network to monitor changes including coastal erosion and to disseminate data and information on sea level change and options in response.

144. Monitoring the current state of natural resources and resource use and management practices.

145. Undertaking studies and assessments of the resilience and adaptability of resources and their vulnerability to climate change, in order to formulate strategies for their preservation.

146. Development of technologies which, while consistent with the principles of sustainable development, increase productivity and efficiency of land and water use.

Energy efficiency and conservation

147. Parties to have obligations in respect of energy efficiency and conservation which are based upon their differentiated responsibility for climate change.

148. Duty to encourage energy efficiency and energy conservation; Minimum energy efficiency standards [and] targets to be set on the basis of differentiated responsibility.

Subsidies

149. Prohibition on subsidizing activities which contribute to climate change.

150. Elimination of subsidies and incentives for inefficient resource use.

151. Prohibition on the dumping of goods benefitting from subsidies which support activities adversely affecting climate.

Renewable energy resources

152. Parties shall develop and encourage use of renewable energy resources including wind, wave, biomass, solar and geothermal sources of energy.

153. Parties shall be entitled to provide fiscal and other incentives, including subsidies, for the development and use of renewable energy resources.

Yugoslavia (Add. 9, p. 5)

154. The obligation of States signatories to undertake, as a precaution on the basis of best available technologies, the following measures:

- to decrease GHG, in particular CO₂, by using the best available technology;
- to conserve and develop CO₂ sources and reservoirs;
- to develop strategies for climate change adaptation and for neutralizing negative effects.

155. The obligation of States, the developed countries in particular, to stabilize SO₂ emission in a given time frame and to draw out measures for decreasing the other GHG.

156. Measures for limiting emissions in certain sectors of the economy (power generating industry, industry, wood industry, agriculture...).

157. Together with the defining of obligations of States signatories there should be protocols on:

- GHG decrease;
- ways for securing and investing new and additional financial resources and technology transfer.

- B. Appropriate commitments on adequate and additional financial resources to enable developing countries to meet incremental costs required to fulfil the commitments referred to above and to facilitate the transfer of technology expeditiously on a fair and most favourable basis (Decision 1/1, paragraph 6 (b))

Austria/Switzerland (Add. 1, pp. 7 & 9)

Specific provisions.

1. Obligation to co-operate in the development of funding mechanisms, particularly through existing mechanisms, for the transfer of additional financial and technological resources for the above mentioned countries in order to assist them in preparing for anticipated climate change and in meeting the obligations under the convention and its related protocols.

2. Development and transfer of technology and technical assistance.

Protocols/Annexes

3. Protocols/Annexes on programmes for actions setting targets for the limitation and/or reduction of net greenhouse gas emissions, in particular CO₂, might cover the following issues:

Development and transfer of technology

China (Add. 4, p. 6)

Funding mechanism

4. The Parties shall establish, pursuant to paragraph 2 of Article 3 (see section I. A, paragraphs 8-9), a mechanism for the purposes of providing financial and technical co-operation, including the transfer of technologies, to the Parties that are developing countries.

5. The mechanism established under paragraph 1 (see paragraph 4 above) shall include a Multilateral Fund composed of adequate, additional and timely financial resources. Such a Multilateral Fund shall not exclude any other means or arrangements of multilateral, regional and bilateral co-operation.

6. The Parties shall agree at a meeting of the Conference of the Parties, through appropriate procedures, upon the specific measures to implement the obligations set out in paragraphs 1 and 2 of this Article (see paragraphs 4 and 5 above). Such measures shall be included, as appropriate, in the relevant protocols to the Convention.

Transfer of technology

7. The Parties shall take every practicable step to ensure that requisite environmentally-sound technologies are expeditiously transferred so as to meet the technological needs of the Parties that are developing countries in implementing the obligations set out in Article 3 above (see Section I. A, paragraphs 8-9).

8. The Parties shall have the obligations to ensure that the transfer referred to in paragraph 1 (see paragraph 7 above) be made to the Parties that are developing countries under fair and most favourable conditions.

9. The Parties shall agree at a meeting of the Conference of the Parties, through appropriate procedures, upon the specific measures to implement the obligations set out in paragraphs 1 and 2 of this Article (see paragraphs 7 and 8 above). Such measures shall be included, as appropriate, in the relevant protocols to the Convention

10. The Parties shall ensure the effective implementation of the provisions of this Article by adopting appropriate measures.

Germany (Add. 1, p. 22)

11. The developed countries shall declare their readiness to support developing countries in the participation of the present Convention whose own economic performance does not suffice to comply with obligations arising from this agreement and its protocols. They shall provide adequate and additional financial resources.

12. The Contracting Parties shall declare their readiness to cooperate in the development and transfer of knowledge and technology in line with their national legislation, regulations and practice.

13. The Contracting Parties shall regard the application of economic and fiscal instruments as appropriate. In this respect, the fullest use possible should be made of existing possibilities for achieving signaling effects.

India (Add. 3, p. 5)

14. Developed country Parties shall, as immediate measures:

...
(b) provide new and additional financial resources for developing country Parties for the objective described in paragraph 4 (see paragraph 53) below and for them to adapt to and mitigate the adverse effects of climate change and for this purpose to establish a Climate Fund; (c) provide assured access to appropriate, environmentally sound technology on preferential and non-commercial terms, to developing countries; and (d) to support developing countries in their efforts to create and develop their endogenous capacities in scientific and technological research and development directed at combating climate change.
...

India (Add. 3, pp. 6-8)

Co-operation in legal, technical and scientific fields.

...
14bis. The Parties shall cooperate, consistent with their national laws, regulations and practices and taking into account the particular needs of developing countries, in promoting directly or through competent

intergovernmental bodies, the development and transfer of technology and knowledge relevant to scientific and technical research. Such cooperation shall be carried out particularly through:

- (a) Facilitation of the acquisition of environmentally sound technologies by other Parties;
- (b) Provision of information on environmentally sound technologies and equipment, including supply of special manuals or guides, to other Parties;
- (c) The supply of necessary equipment and facilities for research and systematic observations; and
- (d) Appropriate training of scientific, technical and managerial personnel.

Climate Fund

15. The Parties shall establish a Climate Fund. The Climate Fund shall meet on a grant basis, and according to criteria to be decided upon by the Parties, the costs for developing countries Parties to adapt to and mitigate the adverse effects of climate change and for meeting the objective described in paragraph 4 (see paragraph 53) of article 2 of this Convention. The secretarial services and related support costs of the Climate Fund shall be a charge on the Climate Fund.

16. The Climate Fund shall operate under the authority of the Parties who shall decide on its overall policies.

17. The Parties shall establish an Executive Committee to develop and monitor the implementation of specific operational policies, guidelines and administrative arrangements, including the disbursement of financial resources, for the purpose of achieving the objectives of the Climate Fund. The Executive Committee shall discharge its tasks and responsibilities, to be specified in its terms of reference as agreed by the Parties at their first meeting, with the cooperation and assistance of the United Nations Environment Programme. The members of the Executive Committee shall be selected on the basis of an equitable representation of developed countries Parties and of developing countries Parties.

18. The Climate Fund shall be financed by contributions from developed countries Parties in convertible currency or, in exceptional circumstances, in national currency.

19. The Parties shall decide upon the programme budget of the Climate Fund for each fiscal period.

20. Resources under the Climate Fund shall be disbursed only to developing countries Parties.

21. Decisions by the Parties under this article shall be taken by consensus as far as possible. If all efforts at consensus have been exhausted and no agreement reached, decisions shall be adopted by a two thirds majority vote of the Parties present and voting, representing a majority of the developed countries Parties and of the developing countries Parties, present and voting.

22. This article is without prejudice to any future arrangements as regards funding that may be developed with respect to Protocols under this Convention.

Transfer of technology

23. Parties shall take every practicable step, consistent with the programmes supported by the Climate Fund, to ensure that:

- (a) Environmentally sound technologies are expeditiously transferred to developing countries Parties; and
- (b) The transfers referred to in subparagraph(a) above occur under preferential and non-commercial terms.

Kenya (Add. 8, pp. 3-4)

24. A financial mechanism be established and be administered by members-party to the framework convention and not through other existing mechanisms or institutions;

25. The transfer of environmentally safe technology be guaranteed and provided on a preferential and non-commercial basis. Furthermore, negotiations and commitments on finance and technology should not under any circumstances be separated from those on other commitments;

Malaysia/Malta (Add. 1, p. 24)

Annexes

26. There could be two annexes establishing appropriate commitments in the following area(s):

...
Transfer of technology and the financing of the needs of developing countries in particular the needs of specially affected island states.

Netherlands Compilation (Add. 1, pp. 44-45, Annex 3)

Financial aspects to be considered in the context of a climate convention and related legal instruments (annexes, protocol, etc.)

27. Elements to be considered:

Finance and assign clearing house functions to:

- (a) Assist recipient countries through country-specific studies and other technical co-operation, to identify their needs in relation to climate change. (in case differentiation of obligations under the convention is envisaged, some non-developing countries might also be considered as recipient countries);

- (b) Facilitate technical co-operation to meet these identified needs;
- (c) Strengthen institutions, develop human resources, distribute information and undertake related activities for the benefit of recipient countries.

28. Funds should become available through relevant channels for the purpose of:

- (a) Promoting efficient use of energy, development of lower and non-greenhouse gas emitting energy technologies and paying special attention to safe and clean new and renewable sources of energy;
- (b) Arranging expeditious transfer of the best available environmentally sound technology on a fair and most favourable basis to recipient countries and promoting rapid development of such technology in these countries;
- (c) Sustainable forest management practices and agricultural techniques which reduce greenhouse gas emissions;
- (d) Limiting and reducing greenhouse gas emission for agricultural activities;
- (e) Enhancing atmospheric, oceanic and terrestrial observation networks, particularly in recipient countries, to facilitate conducting research, monitoring and assessment of climate change and the impact on those countries;
- (f) Coping with negative impacts due to sea level rise resulting from climate change caused by man made activities;
- (g) Enhancing the capacity of recipient countries to develop programs to address climate change, including research and development activities and public awareness and education;
- (h) Co-operation with recipient countries to enable their full participation in international meetings on climate change.

29. Financing of secretarial services and related support costs.

30. Mechanisms/channels for disbursement of funds:

- (a) Directly related to the execution of functions under the Convention;
- (b) To be made available directly or indirectly for the purpose of implementing the objectives mentioned under 1 and 2 (see paragraphs 27 and 28 above).

31. Role of relations to executing international organizations, agencies, programmes and banks, and regional banks.

Netherlands Compilation (Add. 1, p. 32)

Promotion of the development and transfer of environmentally sound technologies and technical as well as financial assistance

32. Arranging expeditious transfer of the best available environmentally sound technology on a fair and most favourable basis to recipient countries and promoting rapid development of such technology in these countries

Norway (Add.2, p.19)

Clearing house system

33. An exchange system can be constructed at various levels of sophistication. One option could be a "bubble" system, based on a bilateral agreement between two countries or a regional agreement between several countries to pool the implementation of their commitments. The most elaborate option could be a system of emission permits that can be traded freely on a world market.

34. An intermediate variety could be a clearing house system. In our opinion, the establishment of a clearing house system seems to be the most promising option for further exploration and implementation in the initial framework convention. The agreement should also provide for research into further development and refinement of trading schemes, to be implemented as appropriate and with due consideration to the need for more elaborate compliance mechanisms. However, these more sophisticated trading schemes are probably not viable for implementation in the initial framework convention.

35. A clearing house could appraise and select projects for reducing emissions, according to their cost-effectiveness and coordinate the funding of these projects. The net reduction in emissions resulting from any specific project should be credited to the country that contributes to the funding of this project and deducted from its national commitment. A clearing house would have a large portfolio of potential projects, thereby facilitating a more efficient matching of projects and funds than a system of bilateral exchanges.

36. Even if one should not manage to agree on specific country commitments in the initial framework convention, a clearing house system might be of great value. Countries with self-declared commitments, or even without specific commitments, would still have the option to finance emission reductions in other countries as an alternative to more expensive reductions in their own countries.

37. In a clearing house mechanism, the transfer of financial resources between countries is integrated in the system. It seems probable that the flow of funds to a large extent will be from the industrialized countries to the developing countries and the countries in transition. This could be supplemented with other financial mechanisms. The clearing house mechanism should function in close cooperation with any such funding mechanisms. Eventually, these mechanisms should be integrated as much as possible. The Global Environmental Facility, which recently was established by the World Bank, UNEP and UNDP, gives a practical demonstration of how a financial mechanism could be organized.

Norway (Add. 2, pp. 21-23)

Financial Transfer Mechanisms/Special Situation of Developing Countries/Countries with an Abnormal Burden

38. Developing countries have as their main priority alleviating poverty and achieving social and economic development. Their emissions will have to be allowed to grow, reflecting their present low energy consumption, in order to accommodate their development needs. Growth in emissions will be allowed to continue until an understanding/agreement to the contrary is reached. However, developing countries should be encouraged on their own accord to accede to developed country status as regards obligations.

39. Developing countries' obligations could, inter alia, consist of ensuring that energy efficiency is improved in an agreed period by reducing the tons of carbon emitted per GNP by a given percent (to be agreed upon).

Financial Mechanism

40. A mechanism will have to be established for the purposes of providing financial and technical cooperation, including the transfer of technologies, to developing countries (DC) or countries with an abnormal burden (AB), to enable their compliance with energy efficiency obligations or self-imposed emission control measures. Transfers should meet all agreed incremental costs in order to enable compliance with obligations, thereby guaranteeing that productive investments are not undercut. Thus, investments in the protection of the global atmosphere that otherwise would not be undertaken due to an insufficient national rate of return, will be secured. Contributions to the mechanism will be separate from and additional to other financial transfers to recipient countries, including development assistance. As an example of such an approach, Norway has established a new budget item for global climate funding, additional to and separate from the development assistance budget. The Norwegian 1991 contribution to the IBRD/UNEP/UNDP Global Environment Facility comes from these funds and thus represents genuine additionality.

The Financial Mechanism established will include a Multilateral Fund:

- (a) To meet, on a grant or concessional basis, agreed incremental costs;
- (b) to assist Parties (DC and AB) through country studies to identify their need for cooperation;
- (c) to facilitate technical cooperation to meet identified needs;
- (d) to facilitate other multilateral cooperation to meet needs for capital investments in energy efficiency, low or non-greenhouse gas agricultural, forestry, industrial, transportation or infra-structural activities;
- (e) to facilitate operations favourable to the global environment that would not go forward without a special extra assistance to provide an acceptable return in relation to a given country's benefit.;

(f) to facilitate investment by one country in another country that could either be a developing country or a country with abnormal burden, based on provisions in the agreement to achieve the most cost-effective solutions to counteract climate change or meet obligated control measures. Such investments should be credited the investor country proportional to the net GHG emission limitations obtained.

41. The Multilateral Fund will operate under the authority of the Parties to the Climate Convention. They will also decide on its overall policies.

42. The Parties may establish an Executive Committee to develop and monitor the implementation of operational policies in cooperation with the IBRD/UNDP/UNEP "GEF" which may administer the Multilateral Fund.

43. An alternative would be to use the "GEF" as the Financial Mechanism. In that case, no Executive Committee needs to be established between the Parties and the Financial Mechanism/GEF. In order for this to take place, the GEF decision making structure needs to evolve in a fashion conducive to policy control by the Parties, and real influence by the developing countries not hitherto a part of the Bretton Woods structure. One option would be for the GEF to become a separate branch of the World Bank, such as the IFC, MIGA, etc.

44. The Financial Mechanism is to initially receive direct budgetary contributions from industrial countries on the basis of burden-sharing (e.g. relative GHG emission in a given year). However, as regards (a) to (e) above, the mechanism could progressively become an integral part of the very operation of the climate regime. In a system based on emission permits which would be freely tradable on the world market, arrangements for transfer of financial resources between countries are integrated in the system. It seems probable that the flow of funds to a large extent would be from the industrialized countries to the developing countries and countries in transition. This system could be supplemented by other financial mechanisms in order to secure adequate flows of funds for these countries. Eventually, these mechanisms should be integrated as much as possible.

45. The Financial Mechanism could as regards (f) above operate as a clearing house or broker. These latter functions can also be expanded to concern trades in GHG emission rights between countries to fulfill obligations in a market-based, cost-effective fashion.

46. A first priority as regards a financing mechanism must be the undertaking of country studies, on a comparable basis, in order to clarify the costs and the distributional effects of a climate strategy based on the concept of incremental costs. See further Norwegian non-paper on this subject.

47. The above in no way suggests that all activities in developing countries need concessional financing in order to have a beneficial effect on climate change. A wide spectrum of investments, e.g. in the energy, forestry/agricultural and industrial field, are of a no-regrets nature and make sense both from an environmental and economic point of view and could thus be financed on non-concessional terms, be it on an equity or credit basis.

48. In the negotiating process, both sub-groups under the Negotiating Committee will have a role to play vis-a-vis the Financial Mechanism. Group I might have the role initially to oversee country studies, what activities are to be financed, financing needs, defining/agreeing on incremental costs and clarifying additionality in terms of commitments by industrial countries.

49. At a later stage, the institutional issues will come to the forefront through Group II: How are agreed commitments/obligations to be implemented, which existing agencies can deliver the goods, what changes are needed in existing institutional arrangements, which new institutions are needed, and their relation to the Convention, the UN and the Bretton Woods system. (See also Norwegian Non-paper country studies (A/AC.237/Misc.1/Add. 2, p 31).

Norway (Add. 2, pp. 25-26)

Technology transfer related to the climate convention.

50. Technology transfer related to the climate convention should be within the following areas:

- (a) Establishment and improvement of monitoring systems;
- (b) Capabilities to assess alternative solutions;
- (c) Technologies to stabilize and mitigate greenhouse gases (many sectors);
- (d) Technologies to adapt to climate change: improved coastal management and improved and robust agricultural technologies, including forestry;
- (e) Energy sector: investment in human and institutional capabilities, for upgrading and more efficient use of existing investments in developing countries;
- (f) Co-development, technological development cooperation where funds should enable suppliers and public sector utilities to take part in international development projects on new and more efficient technology.

Towards a technology transfer mechanism

51. Steps towards a technology transfer mechanism [must comprise]:

- (a) An analysis of the needs of the developing countries and the Eastern European countries;
- (b) an overview of present obstacles to technology transfer;
- (c) overview of present organizations and systems dealing with technology transfer today, and the experience from these projects;
- (d) a study on how to treat technology transfer in view of existing and coming international environmental agreements.

Republic of Korea (Add. 1, p. 52)

52. Developed countries should undertake measures to provide developing countries with financial resources and environmentally sound technologies in order that developing countries may sooner stabilize GHG emissions.

United Kingdom Compilation (Add. 1, p. 59)

See Section I. A, paragraph 13 (e)

United Kingdom Compilation (Add. 1, p. 62)

Co-operation

53. The Parties shall co-operate, consistent with their national laws, regulations and practices and taking into account the level of their development in promoting, directly or through competent international bodies, the development and transfer of technology and knowledge relevant to scientific and technical research. Such cooperation shall be carried out particularly through:

- (a) The supply of necessary equipment and facilities for research and systematic observations, and
- (b) Appropriate training of scientific and technical personnel.

United Kingdom (Add. 1, p. 86)

See Section I. A, p. 21, paragraph 118

United States of America (Add. 1, p. 95)

Development and Transfer of Technology

54. Article 4(2) of the UK draft convention addresses the development and transfer of technology and is generally acceptable. It provides that the Parties, consistent with their national laws, regulations and practices, shall cooperate in promoting, directly or through competent international bodies, the development and transfer of technology and knowledge relevant to scientific and technical research. The UK draft provides for such cooperation through the supply of necessary equipment and facilities for research and monitoring and through appropriate training of scientific and technical personnel.

"See United States submission under I. A (pp. 22-23, paragraphs 120-123).

55. The mechanisms related to financial resources and transfer of technology should be developed in light of United States' submission listed in paragraph 54 above.

[The above is new text received from submitting Delegation.]

Vanuatu (Add. 3, p. 30)

Financial resources and funding mechanisms.

56. Funding will be on the basis of new, additional and adequate financial resources which will not have any effect on existing multilateral or bilateral financial assistance arrangements.

57. Establishment of an International Climate Fund in accordance with Annex 3.

58. Financial assistance for developing countries to enable them to adapt their development strategies to integrate consideration of the effect of those activities on climate.

59. Fund to compensate developing countries (i) in situations where selecting the least climate sensitive development option involves incurring additional expense, and (ii) where insurance is not available for damage resulting from climate change.

Transfer of technology.

60. The parties are under a duty to make available to [an appropriate international body]: (i) any technology or technique that would assist the parties in carrying out their obligations under this convention which they are capable of obtaining or is in the public domain in the area under their jurisdiction or control (ii) the results of research into technology under Article 8 (see Section II. B).

61. All parties shall have equal access to the information and techniques held by the international body.

62. Transfers of technology from industrialized to developing countries must be on fair and most favourable terms.

C. Commitments addressing the special situation of developing countries, taking into account their development needs, including, inter alia, the problems of small island developing countries, low-lying coastal areas and areas threatened by erosion, flooding, desertification and high urban atmospheric pollution: also taking into account the problems of economies in transition (Decision 1/1, paragraph 6 (c))

Austria/Switzerland (Add. 1, p. 7)

Specific provisions

- ...
1. Transitional provisions and specific criteria for developing countries and for countries whose economy are in transition.

Germany (Add. 1, pp. 18-19)

- ...
2. Countries which until now have had a relatively low energy consumption and thus low emissions, but which will continue to grow because of their economic and social situation can set appropriate objectives and strategies for their development. They ought, however, to play their part in limiting the increase of emissions by accepting the obligation to strive for more efficient energy use in their economic activity and thus for a limitation of emissions.
- ...

Japan (Add. 7, p. 5)

3. Consideration for Developing Countries: [in Pledge and Review process]
 1. Developing countries will be entitled to delay its pledge by one year.
 2. Developing countries may request assistance for their country studies.
 3. The need for external financing in reviewing pledges made by developing countries.

Norway (Add. 2)

4. (see Norway A/AC.237/Misc.1/Add. 2, p. 21, Chapter on Financial transfer mechanisms/special situation of developing countries/countries with an abnormal burden)

Republic of Korea (Add. 1, pp. 51-52)

5. The classification of countries simply as either developed or developing can overlook the unique situation of countries that are in various stages of development. In this regard, newly industrialized countries which have continued to expand greatly their energy consumption to achieve industrialization should be given special consideration as should Eastern European countries whose economies are in transition.

6. To this end it will be necessary for all developing countries to pursue stabilization of GHG emissions within differentiated time-frames according to their economic and technical capacities.

7. To ensure the full participation of developing countries without hindering their national development, a grace period for developing countries will be needed for stabilizing GHG emissions.

United States of America (Add. 1, p. 94)

See United States submission under I. A, pp. 21-22, paragraphs 125-126: Assessment and consideration of response measures.

Vanuatu (Add. 3, p. 25 and Corr.1))

Special needs of certain categories of countries, regions and areas

8. Small island developing countries - low-lying coastal areas - arid and semi-arid areas - tropical regions liable to flooding - areas liable to drought and desertification.

9. Entitlement to participate in the work of the Committees established to implement the Convention thus ensuring representation of the special needs.

10. Financial assistance for adaptation strategies.

11. Financial and technical assistance for monitoring, observation and scientific research.

12. Consideration of specific, localized problems including coral bleaching (and related damage to near-shore marine systems and harvestable resources), increasing hurricane intensity, hydrology and storm surges.