



**AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION
UNDER THE CONVENTION**
Fourth session
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Agenda item 3 (a–e)

Enabling the full, effective and sustained implementation of the Convention through long-term cooperative action now, up to and beyond 2012, by addressing, inter alia:

A shared vision for long-term cooperative action

Enhanced national/international action on mitigation of climate change

Enhanced action on adaptation

Enhanced action on technology development and transfer to support action on mitigation and adaptation

Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation

**Ideas and proposals on paragraph 1
of the Bali Action Plan**

Revised note by the Chair**

Summary

The document was prepared by the Chair of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) in response to the request from the AWG-LCA at its third session. The document assembles the ideas and proposals presented by Parties on the elements contained in paragraph 1 of the Bali Action Plan (BAP), and takes into account the ideas and proposals presented by accredited observer organizations.

The structure of the assembly document follows the structure of the BAP, and consists of five chapters assembling ideas and proposals on the five elements of the BAP, namely on a shared vision for long-term cooperative action; enhanced national/international action on mitigation of climate change; enhanced action on adaptation; enhanced action on technology development and transfer to support action on mitigation and adaptation; and Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation.

* Reissued for technical reasons.

** This document was submitted before the closure of the fourth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA).

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I. Introduction

A. Mandate

1. At its third session the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) invited its Chair to prepare, under his own responsibility, a document assembling the ideas and proposals presented by Parties on the elements contained in paragraph 1 of the Bali Action Plan (BAP), taking into account the ideas and proposals presented by accredited observer organizations. The ideas and proposals shall be those received by 30 September 2008 in response to the invitations contained in the BAP and in the conclusions of the first and second sessions of the AWG-LCA, as well as those that were presented during the first three sessions and in the in-session workshops. The document shall be prepared in accordance with the structure of paragraph 1 of the BAP. The AWG-LCA requested the secretariat to make the document available before its fourth session. It further invited the Chair to update this document before the closure of the fourth session of the AWG-LCA based on submissions received after 30 September 2008 and ideas and proposals put forward during that session (FCCC/AWGLCA/2008/12, para. 27).

B. Scope and general approach

2. This assembly document is prepared in response to the above mandate, taking into account the Group's determination to shift into full negotiation mode, to further clarify and facilitate consideration of the ideas and proposals presented by Parties and organizations, and to advance negotiation on all elements of the BAP in a comprehensive and balanced way. Submissions received by 6 December have been taken into account in preparing this assembly document.

3. In accordance with the mandate, this assembly document is focused on **ideas and proposals** from Parties and does not include expressions of views, examples of specific activities or other background information conveyed by Parties and observers.

4. The structure of this assembly document follows the structure of the BAP, and consists of five chapters assembling proposals and ideas on the five elements of the BAP, as follows:

- (a) Chapter II: A shared vision for long-term cooperative action;
- (b) Chapter III: Enhanced national/international action on mitigation of climate change;
- (c) Chapter IV: Enhanced action on adaptation;
- (d) Chapter V: Enhanced action on technology development and transfer to support action on mitigation and adaptation;
- (e) Chapter VI: Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation.

5. Within the structure, the ideas and proposals were organized taking into account the sub-elements of the BAP, and their specific aspects, as well as the structure of the submissions.

6. Ideas and proposals by observer organizations are presented under each substantive issue/subheading.

C. Sources of information

7. **One hundred and ten** submissions were made by a large number of Parties. These submissions are included in the Miscellaneous documents listed below. References are given in the form (Party name, abbreviated MISC number e.g.: MISC.5). For editorial reasons, when multiple submissions from different Miscellaneous documents are referenced, they are sorted according to their MISC number in numerical

order. If multiple Parties in the same Miscellaneous document are referenced, they are sorted in alphabetical order according to the name of the Party. The documents are:

- (a) FCCC/AWGLCA/2008/MISC.1, containing submissions from Argentina, Bangladesh, Brazil, China, Colombia, Egypt, Iceland, India, Indonesia, Maldives on behalf of the least developed countries (LDCs), Mauritius, Micronesia (Federated States of), New Zealand, Norway, Pakistan, Philippines, Rwanda, Saudi Arabia, Singapore, Slovenia on behalf of the European Community (EC) and its member States, Sri Lanka, Switzerland on behalf of the Environmental Integrity Group (EIG), Turkey, United States of America, Uruguay, Uzbekistan;
- (b) FCCC/AWGLCA/2008/MISC.1/Add.1, containing submissions from Japan, Pakistan, South Africa;
- (c) FCCC/AWGLCA/2008/MISC.1/Add.2, containing submissions from Australia, Canada;
- (d) FCCC/AWGLCA/2008/MISC.1/Add.3, containing a submission from Tuvalu;
- (e) FCCC/AWGLCA/2008/MISC.2, containing submissions from France on behalf of the EC and its member States, Japan, Mexico, Norway, Republic of Korea, Singapore, Uruguay;
- (f) FCCC/AWGLCA/2008/MISC.2/Add.1, containing submissions from Australia, Barbados on behalf of the Alliance of Small Island States (AOSIS), Ghana, Mongolia, Philippines on behalf of the Group of 77 (G77) and China, South Africa on behalf of the African Group, Switzerland, Ukraine;
- (g) FCCC/AWGLCA/2008/MISC.4, containing submissions from France on behalf of the EC and its member States, Japan;
- (h) FCCC/AWGLCA/2008/MISC.4/Add.1, containing submissions from Australia, Indonesia, Japan, Mexico, New Zealand, Papua New Guinea;
- (i) FCCC/AWGLCA/2008/MISC.5, containing submissions from Antigua and Barbuda on behalf of the G77 and China, Argentina, Brazil, Belize et al.,¹ China, Iceland, Japan, New Zealand, Norway, Panama, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, Republic of Korea, Russian Federation, Singapore, Sri Lanka, South Africa, Turkey, United States of America;
- (j) FCCC/AWGLCA/2008/MISC.5/Add.1 and Corr.1, containing submissions from Colombia, France on behalf of the EC and its member States, India;
- (k) FCCC/AWGLCA/2008/MISC.5/Add.2, containing submissions from Algeria, Algeria et al.,² AOSIS, Argentina et al.,³ Australia, Australia and Indonesia (joint submission), Belarus, Bolivia, Canada, Chile, China, France on behalf of the EC and its member States, Guatemala on behalf of El Salvador, Honduras, Nicaragua, Costa Rica and Panama, Iceland, India, Indonesia, Indonesia on behalf of the Association of Southeast Asian Nations (ASEAN), Japan, Madagascar, Micronesia (Federated States of), New Zealand, Norway, Pakistan, Philippines on behalf of the G77 and China, Russian Federation, Saudi Arabia, South Africa, Suriname, Switzerland, Switzerland on behalf of

¹ Jointly submitted by Belize, Bolivia, Cameroon, Central African Republic, Costa Rica, Democratic Republic of the Congo, Dominican Republic, Equatorial Guinea, Ghana, Guatemala, Guinea, Kenya, Lesotho, Liberia, Nicaragua, Panama, Pakistan, Papua New Guinea, Singapore, Solomon Islands, Thailand, Uganda and Vanuatu.

² Jointly submitted by Algeria, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Nigeria, Oman, Qatar, Saudi Arabia, Syrian Arab Republic and United Arab Emirates.

³ Jointly submitted by Argentina, Chile and Uruguay.

the EIG, Trinidad and Tobago, Turkey, United States of America, Venezuela (Bolivarian Republic of).

8. The **80** presentations made by Parties at the AWG-LCA workshops can be found through the links listed below. The form of reference is the shortened workshop title as indicated below:
- (a) Workshop on advancing adaptation through finance and technology, including national adaptation programmes of action (NAPAs) (referred to as “adaptation workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4421.php>;
 - (b) Workshop on effective mechanisms and enhanced means for the removal of obstacles to, and provision of financial and other incentives for, scaling up of the development and transfer of technology to developing country Parties in order to promote access to affordable environmentally sound technologies (EST); and ways to accelerate deployment, diffusion and transfer of affordable environmentally sound technologies (referred to as “technology workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4423.php>;
 - (c) Workshop on investment and financial flows to address climate change (referred to as “finance workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4427.php>;
 - (d) Workshop on cooperative sectoral approaches and sector-specific actions, in order to enhance implementation of Article 4, paragraph 1 (c), of the Convention (referred to as “sectoral approaches workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4491.php>;
 - (e) Workshop on policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (referred to as “forest workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4480.php>;
 - (f) Workshop on a shared vision for long-term cooperative action (referred to as “shared vision workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4668.php>;
 - (g) Workshop on risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance (referred to as “risk workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4670.php>;
 - (h) Workshop on cooperation on research and development of current, new and innovative technology, including win-win solutions (referred to as “R&D workshop”):
<http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4675.php>;
9. In addition, this assembly document includes references to the summaries of views expressed during the first, second and third sessions of the AWG-LCA, presented by the Chair in documents FCCC/AWGLCA/2008/6, FCCC/AWGLCA/2008/11 and FCCC/AWGLCA/2008/13.
10. Furthermore, submissions from 20 intergovernmental organizations (IGOs) were also covered in the assembly document. These submissions are presented in the following documents:
- (a) FCCC/AWGLCA/2008/MISC.3, containing submissions from the Convention on Biological Diversity (CBD), the Food and Agriculture Organization of the United Nations (FAO), the International Civil Aviation Organization (ICAO), the United Nations University (UNU), the World Bank;

- (b) FCCC/AWGLCA/2008/MISC.3/Add.1, containing submissions from the South Centre;
- (c) FCCC/AWGLCA/2008/MISC.6, containing submissions from FAO and the International Fund for Agricultural Development (FAO/IFAD), the Secretariat of the Global Climate Observing System (GCOS), the International Labour Office (ILO), the United Nations Development Programme (UNDP), the United Nations Industrial Development Organization with the International Atomic Energy Agency on behalf of UN-Energy (UNIDO/IAEA), the United Nations International Strategy for Disaster Reduction (ISDR), the World Meteorological Organization (WMO);
- (d) FCCC/AWGLCA/2008/MISC.6/Add.1, containing a submissions from the Inter-Agency Standing Committee and ISDR (IASC/ISDR),
- (e) FCCC/AWGLCA/2008/MISC.6/Add.2, containing submissions from CBD, ICAO, ILO, International Maritime Organization (IMO), the International Union for the Conservation of Nature (IUCN), United Nations Office for the Coordination of Humanitarian Affairs (OCHA) on behalf of the IASC (OCHA/IASC), the United Nations Convention to Combat Desertification (UNCCD), the United Nations Environment Programme (UNEP).

11. Submissions were received from 32 non-governmental organizations (NGOs). Proposals or ideas from these NGOs can be found at <http://unfccc.int/parties_and_observers/ngo/items/3689.php>. In this document, NGOs are referred to with the abbreviations indicated in the annex.

II. A shared vision for long-term cooperative action

12. In addition to the assembly of ideas and proposals presented below, the discussion on this element of the BAP is also reflected in the Chair's summaries. Please refer to document FCCC/AWGLCA/2008/6, paragraphs 4–11 and document FCCC/AWGLCA/2008/11, paragraphs 5–12.

A. Scope, nature and elements of a shared vision for long-term cooperative action

1. Input by Parties

13. On the **context** of a shared vision, Parties noted that:
- (a) The international community can reduce the risks associated with dangerous anthropogenic interference with the climate system through long-term cooperative action on mitigation and adaptation (Australia, MISC.1/Add.2);
 - (b) A shared vision for long-term cooperative action is already embodied in the Rio Principles (Pakistan, MISC.5/Add.2), the Convention and its KP and is addressed as part of the BAP in order to “enable the full, effective and sustained implementation of the Convention” (Bolivia, MISC.5/Add.2) now, up to and beyond 2012 (Pakistan, MISC.5/Add.2);
 - (c) A global effort involving all Parties is required (Iceland, MISC.1; Australia, Canada, MISC.1/Add.2; Japan, MISC.2; Brazil, New Zealand, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, Russian Federation, Singapore, MISC.5; AOSIS, Canada, Chile, EC and its member States, Iceland, MISC.5/Add.2), taking into account national circumstances and capabilities (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, Russian Federation, MISC.5);
 - (d) A shared vision is needed on how to forge a path towards a low-carbon society (EC and its member States, MISC.5/Add.2 and shared vision workshop), where developed countries reduce GHG emissions and assist developing countries in forging a cleaner path

towards economic development (Iceland, MISC.5/Add.2); to ensure that the negative impacts resulting from the build-up of GHGs in the atmosphere do not adversely effect the developmental aspirations and survival of any country, especially the most vulnerable, particularly small island developing states (SIDS) and LDCs (AOSIS, MISC.5/Add.2 and shared vision workshop), thus enabling them to better address the problems of climate change and the impact of response measures (Algeria et al., MISC.5/Add.2);

- (e) An approach to climate change is most likely to be effective and sustainable if it results in actions that are commensurate with all Parties' capabilities to act (United States, MISC.5/Add.2);
- (f) Nationally appropriate mitigation commitments and actions (NAMAs) from all major emitting countries (Iceland, MISC.1 and MISC.5/Add.2; Canada, Australia, MISC.1/Add.2; New Zealand, MISC.5) and common determination of all major economies, over an appropriate time frame, to slow, stop and reverse global growth of emissions and move towards a low-carbon society (Russian Federation, MISC.5) are required;
- (g) All Parties and stakeholders including governments, IGOs, NGOs, the private sector, civil society and individuals around the world (Chile, MISC.5/Add.2) need to pool intellectual, technical, financial and administrative resources and to join forces to combat adverse impacts of climate change (Pakistan, MISC.1); gender considerations and balanced gender participation are important in this context (Iceland, MISC.5/Add.2);
- (h) Addressing climate change necessarily requires reorienting current global economic growth patterns (Argentina, MISC.5) and focusing more on sustainable consumption and production (Mauritius, MISC.1), which involves not only changes in the technological schemes in economic activity, but in the patterns of collective and individual contact (Venezuela (Bolivarian Republic of), MISC.5/Add.2). Climate awareness must be an integral part of economic policies and development plans (Iceland, MISC.5/Add.2);
- (i) The shared vision, including a long-term goal, has implications for the structure and architecture of the agreed outcome, which should build on and broaden the Kyoto Protocol (KP) architecture (EC and its member States, MISC.5/Add.1).

14. On the **scientific basis**, Parties noted that:

- (a) The Intergovernmental Panel for Climate Change (IPCC) provides a basis for making informed decisions (Australia, MISC.1/Add.2; Argentina, MISC.5; India, MISC.5/Add.1, Chile, MISC.5/Add.2; Bangladesh, Ecuador et al., African Group, shared vision workshop), and gives enough comfort to translate the ultimate objective of the Convention into a quantitative goal (Iceland, MISC.5/Add.2). At the same time, the evolving nature of scientific endeavour as well as the areas not covered by the IPCC reports must be borne in mind (Micronesia, MISC.5/Add.2);
- (b) More analytical work is required on different solutions, including on costs associated with each scenario, and combining the IPCC findings with other mitigation cost studies (Norway, MISC.1; Pakistan, MISC.5/Add.2), including recent findings on the potential for life-threatening non-linear climate changes (Bolivia, MISC.5/Add.2). It is essential that information on the availability of the technology, on the costs of adopting the technology, on the funds available to support mitigation actions in developing countries, and on how to access these funds is properly documented and readily available when needed (Singapore, MISC.2);

- (c) Discussions should include information on what is already being done in many countries to integrate climate change considerations into development planning, and to pursue a clean development path (Philippines, MISC.1).

15. On the **nature of a shared vision**, Parties proposed that a shared vision is:

- (a) A process to enable the implementation of the Convention through long-term cooperative action now, up to, and beyond 2012 (African Group, shared vision workshop) to reach an agreed outcome and adopt a decision in Copenhagen (Argentina, China, shared vision workshop);
- (b) An integrated approach to addressing climate change (Venezuela (Bolivarian Republic of), MISC.5/Add.2) and enable sustainable development (Argentina, MISC.5);
- (c) A pathway to fulfil the ultimate objective of the Convention (New Zealand, MISC.5) that guides long-term cooperative action (South Africa, MISC.1/Add.1) and pays similar levels of attention to mitigation, adaptation, technology transfer and financial resources (Indonesia, MISC.5/Add.2) in order to achieve coherent results regarding long-term cooperative measures (Russian Federation, MISC.5);
- (d) A bottom-up approach (Pakistan, MISC.5/Add.2);
- (e) An overarching element, essential to ensuring development towards a safe and sustainable low-carbon economy, sustainable production and consumption, and energy security, as well as climate-resilient society (EC and its member States, MISC.2 and MISC.5/Add.1);
- (f) A frame for decisions on reducing net GHG emissions, increasing action for adaptation to climate change and stepping up efforts to develop and disseminate climate-friendly technology and practices (Iceland, MISC.5/Add.2);
- (g) A key component of the BAP useful for determining: financing and technology transfer actions (Argentina, MISC.5); emission reduction commitments required of all major emitting countries; ways to enhance adaptation and respond to the adverse effects of climate change (Argentina, MISC.5); and enhanced mitigation and adaptation actions of all Parties (Canada, MISC.1/Add.2);
- (h) Aspirational in nature, consisting of an ambitious, concrete and measurable long-term target and a framework for immediate and future action to implement the four pillars of the BAP (AOSIS, MISC.5/Add.2 and shared vision workshop);
- (i) An exchange of views or ideas providing general and clear guidance about how to enable the full, effective and sustained implementation of the Convention, addressing cooperative and enhanced action on mitigation, adaptation, technology, finance and capacity; not be a final result or a textual language in the agreed outcome to be reached at fifteenth session of the Conference of the Parties (COP) (China, MISC.5 and MISC.5/Add.2).

16. On the **scope of a shared vision**, Parties proposed that a shared vision should:

- (a) Provide a framework for actions commencing now and continuing into the future, guided by the urgency of action; aimed at achieving the ultimate objective of the Convention as set out in its Article 2 (AOSIS, Micronesia (Federated States of), MISC.5/Add.2; Ghana, African Group, shared vision workshop); enable the full, effective and sustained implementation of the Convention (G77 and China, China, MISC.5/Add.2; Brazil,

- Ecuador et al., shared vision workshop), in order to reach an agreed outcome and adopt a decision at COP15 in Copenhagen (Argentina, shared vision workshop);
- (b) Be focused on the implementation of the Convention, its KP and the Bali Road Map, and address mitigation, adaptation, technology transfer and provision of financing resources (China, shared vision workshop);
 - (c) Elaborate on the practical implications of the principles of the Convention for mitigation, adaptation, financing and technology development and transfer (Brazil, MISC.5 and shared vision workshop);
 - (d) Guide efforts on mitigation (Pakistan, MISC.1; New Zealand, MISC.5; EC and its member States, MISC.5/Add.1), adaptation (China, Philippines, Pakistan, MISC.1; Japan, Singapore, MISC.2, EC and its member States, MISC.5/Add.1) and sustainable development (China, Philippines, MISC.1; Japan, MISC.2; Argentina, MISC.5; African Group, shared vision workshop), and include elements addressing technology and finance (Pakistan, MISC.1; Argentina, MISC.5; Venezuela (Bolivarian Republic of), MISC.5/Add.2);
 - (e) Be linked to objectives for mitigation, adaptation, technology development and transfer and levels of financing; all being measured, reported and verified (Ghana, shared vision workshop);
 - (f) Be composed of the four building blocks of the BAP (G77 and China, China, EC and its member States, MISC.5/Add.2; Ghana, China, shared vision workshop) and not be temporally limited in terms of actions and actors (Ghana, shared vision workshop);
 - (g) Translate the ultimate objective of the Convention into a common and shared understanding on putting the world on a pathway towards a low-carbon society (EC and its member States, Japan, MISC.2 and MISC.5/Add.1; Bangladesh, EC and its member States, shared vision workshop) and elaborate on the establishment of the necessary incentives (Turkey, MISC.1; Norway, MISC.5). It could be framed as a climate, energy and development investment programme for the first half of this century (EC and its member States, MISC.2 and MISC.5/Add.1);
 - (h) Set a strategic vision of adaptation and mitigation measures (Mongolia, MISC.2/Add.1);
 - (i) Take into account the limits of adaptation as well as urgent action on adaptation (EC and its member States, MISC.5/Add.1);
 - (j) Provide a clear statement of political will, guidance and greater clarity for investment decisions (EC and its member States, MISC.2);
 - (k) Facilitate and motivate involvement of all Parties (Turkey, MISC.1; Singapore, MISC.2), ensure that all countries' efforts to address climate change are known and are recognized as part of international action (New Zealand, MISC.5) and ensure an equitable and effective participation of all stakeholders in the future negotiating process (Pakistan, MISC.1/Add.1);
 - (l) Ensure that global emissions follow an agreed quantified pathway that will lead to achieving the agreed quantified long-term goal (Canada, MISC.1/Add.2; New Zealand, MISC.5).
 - (m) Include, but not consist of exclusively, a long-term global goal for emission reductions (EC and its member States, MISC.5/Add.1; African Group, shared vision workshop);

- (n) Include all economic sectors, including the land use, land-use change and forestry (LULUCF) sector (Russia, MISC.5/Add.2); a goal to halt emissions from deforestation and forest degradation and reverse them within the next two to three decades (EC and its member States, MISC.5/Add.1);
- (o) Include the issue of how to deal with preventing overexploitation of the global atmospheric resources in order to prevent dangerous anthropogenic interference with the global climate system (India, MISC.5/Add.1 and shared vision workshop);
- (p) Include measurable, reportable and verifiable mid-term and long-term targets for scaling up financial resources and technology development and transfer (Pakistan, MISC.5/Add.2).

17. On **principles for a shared vision**, Parties proposed that long-term cooperative action should be guided by:

- (a) The provisions and principles of the Convention (Iceland, Turkey, MISC.1; Pakistan, MISC.1/Add.1; Chile, Pakistan, MISC.5/Add.2; Argentina, Ecuador et al., African Group, shared vision workshop), including the principles laid out in the preamble (Brazil, MISC.5; Argentina, shared vision workshop), Article 3 (Argentina, Brazil, MISC.5; AOSIS, MISC.5/Add.2; AOSIS, Argentina, shared vision workshop) and Article 4 (Rwanda, Saudi Arabia, MISC.1; India, MISC.5/Add.1; AOSIS, MISC.5/Add.2; Argentina, Ecuador et al., shared vision workshop);
- (b) The ultimate objective of the Convention (Iceland, Pakistan, Philippines, MISC.1; South Africa, MISC.1/Add.1; China, Russian Federation, MISC.5; China, G77 and China, Indonesia, Venezuela (Bolivarian Republic of), MISC.5/Add.2; Brazil, China, shared vision workshop);
- (c) Equity (Pakistan, Philippines, Rwanda, MISC.1; Argentina, New Zealand, MISC.5; India, MISC.5/Add.1; China, G77 and China, EC and its member States, MISC.5/Add.2; Brazil, Ghana, India, shared vision workshop) and fairness (Turkey, MISC.1); the principle of intergenerational equity (AOSIS, Pakistan, MISC.5/Add.2; AOSIS, Ghana, shared vision workshop); and a human rights perspective (Chile, MISC.5/Add.2);
- (d) The principle of common but differentiated responsibilities and respective capabilities (Philippines, Rwanda, United States, MISC.1; Pakistan, MISC.1/Add.1; Australia, MISC.1/Add.2; Japan, MISC.2; Argentina, Brazil, China, New Zealand, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, Singapore, Switzerland, MISC.5; AOSIS, Chile, China, EC and its member States, G77 and China, Indonesia, Pakistan, Venezuela (Bolivarian Republic of), MISC.5/Add.2; African Group, AOSIS, Brazil, China, EC and its member States, Ecuador et al., Ghana, shared vision workshop);
- (e) The right to development/sustainable development (Philippines, MISC.1; South Africa, MISC.1/Add.1; Argentina, Brazil, MISC.5; India, MISC.5/Add.1; Chile, G77 and China, MISC.5/Add.2; Brazil, China, Ecuador et al., Ghana, India, shared vision workshop); giving legitimate priority to sustainable development and to poverty eradication in Parties not included in Annex I to the Convention (non-Annex I Parties) (G77 and China, MISC.5/Add.2);
- (f) The polluter pays principle (Pakistan, MISC.1/Add.1; Switzerland, MISC.5; AOSIS, MISC.5/Add.2; AOSIS, Ghana, shared vision workshop);
- (g) The common concern of humankind and the precautionary principle (Brazil, MISC.5; AOSIS, Micronesia (Federated States of), Venezuela (Bolivarian Republic of),

MISC.5/Add.2; Ghana, shared vision workshop) and prevention (G77 and China, MISC.5/Add.2), including protecting the most vulnerable (AOSIS, shared vision workshop);

- (h) The principle of state responsibility (AOSIS, MISC.5/Add.2 and shared vision workshop);
- (i) Effectiveness in reaching the long-term global goal and fairness in sharing the burdens and allocation assistance (Iceland, MISC.5/Add.2).

18. On a shared vision for enhanced action on mitigation, Parties proposed that future **cooperative action on mitigation** should (see also chapter III):

- (a) Be ambitious, reflect the urgency of collective endeavour and be sufficient to safeguard the most vulnerable Parties from the adverse impacts of climate change (LDCs, MISC.1; Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5; AOSIS, MISC.5/Add.2);
- (b) Be comprehensive (Iceland, Pakistan, MISC.1; Norway, Singapore, MISC.5) and aim to include all major sources and sinks of GHGs and be rigorous in its scientific and methodological underpinning (Iceland, MISC.1; Norway, MISC.5);
- (c) Be based on sound scientific information (South Africa, MISC.1/Add.1; Argentina, New Zealand, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5; AOSIS, MISC.5/Add.2);
- (d) Provide for flexibility in designing a new global post-2012 regime (Russian Federation, MISC.5) and in accounting for different capabilities and national circumstances in a transparent manner (Iceland, MISC.1);
- (e) Combine the overall need for emission reduction with the need for economic growth in an environmentally sustainable manner (Canada, MISC.1/Add.2; Norway, Singapore, MISC.5); be cost-effective (Iceland, MISC.5/Add.2);
- (f) Address the impacts that a future global agreement will have on the development prospects of developing countries (Argentina, MISC.5), and ensure development rights and spaces for developing countries (China, MISC.5) so that any mitigation actions imposed will not lead to a slowdown in economic growth or affect national efforts to alleviate poverty (Singapore, MISC.5); compensate developing countries for incremental costs if achieving a global stabilization goal necessitates mitigation measures by developing countries (India, MISC.5/Add.1 and shared vision workshop);
- (g) Not be punitive and enforceable; envisage effective incentives for the participants to fulfil their commitments; contain procedures and mechanisms allowing, if necessary, these commitments to be adjusted on a course of their implementation; and provide continuity of efforts of the world community (Russian Federation, MISC.5);
- (h) Include measures for the expansion of the carbon market, seeking to establish a global price on all GHGs (Norway, MISC.5; Iceland, MISC.5/Add.2);
- (i) Ensure that all significant investment and planning decisions factor-in climate change considerations, including mitigation and adaptation (New Zealand, MISC.5)
- (j) Be undertaken in a manner in which risk is shared between developed and developing countries (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5).

19. On a shared vision for enhanced action on **adaptation** (see also chapter IV) Parties proposed that:
- (a) Developed countries should strengthen support (China, shared vision workshop); all countries should continue to address adaptation needs and to help the most vulnerable countries adapt to the impacts of climate change (Turkey, MISC.1; Canada, MISC.1/Add.2; New Zealand, MISC.5) as a priority (Chile, MISC.5/Add.2; AOSIS, Bangladesh, Ecuador et al., shared vision workshop);
 - (b) Action on adaptation should respond to the impacts that are already occurring and be sufficient to address the impacts that are expected to occur in the future (AOSIS, MISC.5/Add.2);
 - (c) A framework for action on adaptation is needed, laying out the range of actions to promote country-driven adaptation strategies, with a view to leveraging the capability that already exists and galvanizing national and international support for adaptation priorities to promote climate-resilient development (EC and its member States, United States, MISC.5; EC and its member States, shared vision workshop);
 - (d) It should be on precautionary basis, that is, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing the implementation (Brazil, MISC.5).
 - (e) The goal of adaptation is to strengthen resilience, to reduce the vulnerability of economic, social and ecological systems, to minimize the negative impacts of climate change on human health and welfare and on sustainable development, and to make full use of any opportunities (EC and its member States, MISC.5/Add.1).
20. On a shared vision for enhanced action on **technology** (see also chapter V), Parties proposed that:
- (a) Technology is required to achieve the long-term goal (Japan, MISC.2 and shared vision workshop). and should include innovative technology development and deployment and the diffusion of existing technologies (Canada, MISC.1/Add.2; Japan, MISC.2; New Zealand, MISC.5);
 - (b) It could be guided and driven by a number of factors, including medium- to long-term global goals for emission reductions; a necessary quantum of technology development, deployment and diffusion; an urgent need for adapting to the impacts of climate change (Bangladesh, shared vision workshop); a sufficient level of finance and investment, extended sectoral coverage; and the participation of all technology development and transfer actors (Ghana, MISC.2/Add.1);
 - (c) A technology transfer-based long-term global goal for emission reduction could be quantified in terms of the mitigation potential, volume and/or value of technologies to be transferred and deployed, broken down by technology categories, areas and/or regions (Pakistan, MISC.5/Add.2);
 - (d) Further development of innovative technologies and measures to realize low-carbon societies should be strengthened from a long-term perspective (Japan, MISC.5). It is important to increase the size of investment and to speed up the development and deployment of technologies (New Zealand, MISC.5);
 - (e) Public and private sectors need to share an understanding for the future direction of technologies to be prioritized, contributing to the establishment of an international partnership for innovative technology development (Japan, MISC.2);

- (f) Ways and means of prohibiting the export of environmentally unfriendly equipment to developing countries should be addressed (Rwanda, MISC.1).

21. On a shared vision for enhanced action on the provision of **finance and investment** (see also chapter VI) Parties proposed that the goal is:

- (a) To bring about coherence in the global financial architecture for financing under the authority and governance of the COP (G77 and China, MISC.2/Add.1; Bangladesh, shared vision workshop);
- (b) To support adequate finance and investment flows to strengthen the capability of Parties to address the challenge of financing climate change policies, programmes and measures, especially for those vulnerable countries with limited internal resources (New Zealand, Switzerland, MISC.5);
- (c) To provide guidance on the scale of the investment required to reach the long-term goal and achieve a sustainable low-carbon society as well as to adapt to unavoidable climate change and increase climate resilience (EC and its member States, MISC.5/Add.1 and shared vision workshop);
- (d) To develop an architecture to optimize and mobilize investment and financial flows and to deliver financing efficiently, effectively and equitably (EC and its member States, shared vision workshop).

22. On **principles for contribution by different groups of countries** to long-term cooperative action (see also chapter III), Parties proposed that:

- (a) All Parties will be required to take action in keeping with the principle of common but differentiated responsibilities (AOSIS, MISC.5/Add.2; Ecuador et al., shared vision workshop);
- (b) There is need to take into account different national circumstances (Canada, MISC.1/Add.2; New Zealand, MISC.5), including specific needs and special circumstances of developing countries (Rwanda, MISC.1; Argentina, Brazil, Singapore, MISC.5), of those particularly vulnerable to the adverse effects of climate change, and of those who will bear a disproportionate burden (Argentina, MISC.5), and to take into consideration the limitations faced by alternative-energy-disadvantaged countries (Singapore, MISC.5);
- (c) Efforts by Parties should be comparable in relation to their capabilities and social and economic conditions. The establishment of key indicators for guidance in this regard would be helpful, to increase transparency and inspire trust (Iceland, MISC.1);
- (d) The effort at the multilateral level must be fair and equitable, with due respect to the principle of common but differentiated responsibilities and respective capabilities (Argentina et al., MISC.5 Add.2);
- (e) A shared vision should reiterate the established legal distinction between the obligations of Parties included in Annex I to the Convention and non-Annex I Parties (Brazil, MISC.5);
- (f) Developed countries are historically responsible (China, shared vision workshop) for threatening the planet with climate change and owe the world an ecological debt (Bolivia, MISC.5/Add.2);

- (g) The shared vision also has to acknowledge that each country must do its fair share to solve the problem (EC and its member States, MISC.5/Add.1 and shared vision workshop);
- (h) New sight on the differentiation among Parties is required (Australia, MISC.1/Add.2; New Zealand, Russian Federation, MISC.5), based on recent advances in scientific knowledge and changing social and economic situation in the world (United States, MISC.1; Russian Federation, MISC.5). Specific proposals include development of:
 - (i) A dynamic continuum with different commitments, actions and support for different countries based on common, objective criteria to guide mitigation commitments and actions (New Zealand, MISC.5);
 - (ii) An objective basis for graduation of non-Annex I Parties to the Annex I list or additional lists which may be adopted under a future framework, with a view to all advanced economies adopting a comparable effort towards the mitigation of climate change (Australia, MISC.1/Add.2);
- (i) Developed countries should:
 - (i) Take the lead in combating climate change and the adverse effects thereof (Philippines, MISC.1; Argentina, Brazil, China, MISC.5; AOSIS, Pakistan, MISC.5/Add.2), not only in mitigation but also in adaptation (Philippines, MISC.1), as well as in the provision of funding, and on activities related to technology transfer for adaptation and mitigation (AOSIS, Indonesia, MISC.5/Add.2; AOSIS, China, Ecuador et al., shared vision workshop);
 - (ii) Take the lead by committing to ambitious mid-term targets and to supporting developing countries in the transition to a low-carbon society (EC and its member States, MISC.5/Add.1);
 - (iii) Take the lead in reducing their GHG emissions, while ensuring developing countries the right and space for development (China, MISC.5/Add.2);
 - (iv) Provide developing countries with adequate, predictable, and sustainable financial and technical support and, where appropriate, technology transfer (Rwanda, MISC.1; Singapore, MISC.2; Argentina, MISC.5);
 - (v) Take more responsibility for historical and present emissions through greater commitments (AOSIS, MISC.5/Add.2), tangible results (implementation) and technology transfer and increased resources to support developing countries (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5);
 - (vi) Take on the bulk of the emission reduction effort through binding commitments, and cover a large part of the cost of mitigation and adaptation efforts by developing countries, particularly the low and medium income countries (Pakistan, MISC.1/Add.1);
- (j) Efforts by developing countries should be supported and enabled by technology and substantial financial support and capacity-building from developed countries (Indonesia, Chile, MISC.5/Add.2) in a reliable and predictable manner, and in accordance with the national circumstances and capability of the receiving countries (Norway, MISC.5);
- (k) Financial and technological assistance from developed countries is essential to help developing countries make the switch to alternative energy sources (Singapore, MISC.5);

- (l) An important equity factor for determining burden sharing are the principles of historical responsibility for climate change (Brazil, Turkey, MISC.5; Pakistan, Venezuela (Bolivarian Republic of), MISC.5/Add.2; Brazil, Ecuador et al., shared vision workshop) and equitable sharing of the carbon space (India, MISC.5/Add.1 and shared vision workshop);
- (m) Any decision on burden sharing must reflect not only scientific, but also equity, economic, social, political and other considerations (Argentina, MISC.5);
- (n) Developing countries should implement mitigation actions, supported by finance technology and capacity-building (China, shared vision workshop), with a view to deviating emissions trends from the baseline (Brazil, MISC.5) in line with their cumulative emissions, mitigation potential and opportunities, bearing in mind national circumstances and the principle of common but differentiated responsibilities and respective capabilities (AOSIS, MISC.5/Add.2 and shared vision workshop);
- (o) While LDCs, too, as a group should have lower emissions than their baseline projections may indicate, such deviations from the baseline projection should be less compared to others (Bangladesh, LDCs, MISC.1).

2. Input by observer organizations

23. Observer organizations have also shared concrete ideas and proposals on shared vision, as follows:

- (a) On principles for the shared vision, observer organizations proposed that a shared vision should:
 - (i) Be based on equity (ILO, MISC.6; CAN, GLOBE, TNC), which should apply not only between, but also within countries (ILO, MISC.6/Add.2, ITUC);
 - (ii) Be based on principles of critical mass, flexibility, urgency and sustainable development (ILO, MISC.6/Add.2; GLOBE, TNC);
 - (iii) Be comprehensive and ambitious, and lay down the yardsticks against which the agreement is measured (CAN);
 - (iv) Include social and gender considerations (WEDO/GCCA);
 - (v) Highlight industrial energy efficiency in particular (UNIDO/IAEA, MISC.6; ICAO, MISC.6/Add.2);
 - (vi) Recognize the rights of free, prior and informed consent of indigenous peoples (FOEI);
 - (vii) Recognize fundamental and internationally protected human rights (FOEI);
 - (viii) Be guided by science and based on: the ultimate objective of the Convention; means to achieve its full and effective implementation; and the principles of common but differentiated responsibilities and respective capabilities, effectiveness, and efficiency (TNC);
- (b) On the scope for shared vision, observer organizations proposed that a shared vision should:
 - (i) Require a new development paradigm in support of transition towards sustainable economies, including mechanisms for enhancing integrated delivery of development assistance and assistance to address climate change; enhancing

- the supportive role of development agencies to developing countries; and ensuring that any new global climate change regime and global development cooperation are coherent and mutually supportive (UNDP, MISC.6);
- (ii) Include a “just transition framework” and integrate a “social driver” in the process leading to a low-carbon economy (ITUC);
 - (iii) Energy efficiency should be regarded as the “first fuel” of choice for moving towards sustainable development and a global low-carbon energy system (CSEND);
 - (iv) Assign appropriate priority to drivers of economic activity (ICAO, MISC.6/Add.2); assign appropriate priority to the agriculture, forestry and fisheries sectors (FAO/IFAD, MISC.6);
 - (v) Include ecosystem-based adaptation (IUCN, MISC.6/Add.2);
 - (vi) Facilitate coherence between climate policies and economic and social development policies (ILO, MISC.6/Add.2); integrate social drivers in the process leading to a low-carbon economy (ITUC);
- (c) On enhanced action on adaptation, observer organizations proposed that:
- (i) The shared vision for adaptation must present a coherent framework for collaborative action that massively scales up commitment and delivery of adaptation resources and capacity (CAN);
 - (ii) Implementation of the initiative to support climate change adaptation, the international framework to guide the development of climate services, the United Nations system-wide response to the challenge of climate change and the World Climate Conference-3 could contribute to laying the foundation for long-term cooperative action on adaptation (WMO, MISC.6);
 - (iii) Finance made available by developed countries for adaptation in developing countries should be linked to the level of emissions, including auctioning of some portion of assigned amount units (AAUs) (CAN, Oxfam), using levies in the international aviation and maritime sectors (Oxfam), or using the proceeds of levies or of auctioning allowances in the international aviation and maritime sectors (CAN);
 - (iv) The proliferation of charges and taxes on international aviation should be minimized (ICAO, MISC.6/Add.2);
- (d) On enhanced action on technology, observer organizations proposed the creation of an effective, transparent and responsive technology mechanism under the UNFCCC to lead technology cooperation efforts, further develop and disseminate low-carbon technologies, build capacity and enabling conditions, and leverage private sector investments (CAN);
- (e) On enhanced action on finance, observer organizations proposed that:
- (i) An essential element of the shared vision is to make sure other parts of the shared vision are realized (CAN, TWN);
 - (ii) Any new financial architecture under the UNFCCC should reinforce and be coherent with poverty reduction strategies and aid effectiveness agendas (UNDP, MISC.6);

- (iii) Finances must be additional to existing official development assistance (ODA) commitments of 0.7 per cent of gross national income, and must be made available as grants, not as loans (Oxfam).

B. A long-term global goal for emission reductions

1. Input by Parties

24. On the **need for a long-term global goal**, Parties noted that it is necessary:
- (a) To guide concrete and measurable short- and medium-term action. Such a goal contributes to the sustainable development of all Parties and relates to the building blocks of the BAP, including mitigation and adaptation, and can inform investment and research decisions in the private and public sectors on technology and finance risk (EC and its member States, MISC.2, MISC.5/Add.1 and MISC.5/Add.2);
 - (b) For all countries to share the common recognition in addressing long-term challenges (Japan, MISC.2 and MISC.5/Add.2);
 - (c) To inspire actions at all levels (United States, MISC.1);
 - (d) To facilitate the formulation of a comprehensive plan of action required under different blocks of action (mitigation, adaptation, technology transfer and financial mechanisms) (Bangladesh, MISC.1).
25. On the context of a long-term global goal Parties noted that:
- (a) Deep cuts in global emissions will be required to achieve the ultimate objective of the Convention (Bangladesh, LDCs, Norway, MISC.1; Iceland, MISC.5/Add.2);
 - (b) There is a need for cooperative approaches that minimize the impacts of climate change at the lowest achievable stabilization goal (Australia, MISC.1/Add.2);
 - (c) There is a need to agree on goals of emission reduction and its time path, including peaking year for carbon dioxide (CO₂), and on the maximum global mean temperature increase, without jeopardizing global prospects of sustained growth (Bangladesh, MISC.1);
 - (d) Social and economic conditions (including access to financial and investment flows) and other factors will be relevant to consideration of a long-term goal, as will the availability of affordable low-emission technologies (Australia, MISC.1/Add.2);
 - (e) The early establishment of mid-term targets for Annex I countries, and a clear agreement on the levels of financing, technology and capacity-building that will be made available, will assist an eventual discussion of appropriate long-term goals (Argentina, MISC.5).
26. On the **nature of and principles for a long-term global goal**, Parties proposed that the goal should:
- (a) Be guided by the ultimate objective of the Convention (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5);
 - (b) Have as one of the key benchmarks the avoidance of further climate change impacts on vulnerable developing countries, regions, and people, including SIDS and Central American countries (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5; AOSIS, Micronesia (Federated States of), MISC.5/Add.2; AOSIS, Bangladesh, EC and its member States, shared vision workshop);

- (c) Be ambitious (Iceland, MISC.5/Add.2) and reflect the urgency of our endeavour (AOSIS, EC and its member States, MISC.5/Add.2; Bangladesh, EC and its member States, shared vision workshop);
- (d) Be iterative (United States, MISC.1; Australia, MISC.1/Add.2); be indicative (India, MISC.5/Add.1) in order to respond to the evolution of scientific knowledge, technological advancements and changed economic conditions;
- (e) Be achievable (Iceland, MISC.5/Add.2) and realistic (United States, MISC.1; China, MISC.5 and shared vision workshop);
- (f) Ensure that coverage of anthropogenic emissions and removals will aim to be rigorous, robust and comprehensive and take into account all sources and sinks of GHGs (Australia, MISC.1/Add.2); including emissions from international aviation and maritime transportation (EC and its member States, MISC.5/Add.1);
- (g) Be based on sound science (China, MISC.5; EC and its member States, MISC.5/Add.1 and MISC.5/Add.2; EC and its member States, China, shared vision workshop), in particular the Fourth Assessment Report (AR4) of the IPCC (Australia, MISC.1/Add.2; Brazil, MISC.5; EC and its member States, MISC.5/Add.1; Indonesia, MISC.5/Add.2; EC and its member States, shared vision workshop);
- (h) Be based on the best available scientific information taking impacts in SIDS as a benchmark for effectiveness and its appropriateness (AOSIS, Micronesia (Federated States of), MISC.5/Add.2; AOSIS, shared vision workshop);
- (i) Be based on the principle of equality and acknowledgement of the developed countries' historical responsibility (Bolivia, Chile, MISC.5/Add.2); ensuring adequate space for developing countries to achieve the goals of substantive development and eradication of poverty. The per capita accumulative emission convergence is a reflection of the principle of equity (China, MISC.5/Add.2 and shared vision workshop);
- (j) Be cast so as to ensure that global economic development – the necessary antecedent of investments in climate protection – is not undermined (United States, MISC.1);
- (k) Be a legally binding commitment to take appropriate national and international actions by all Parties led by Annex I Parties (AOSIS, MISC.5/Add.2);
- (l) Be aspirational (Iceland, EC and its member States, MISC.5/Add.2; African Group, shared vision workshop) but consisting of an ambitious, concrete and measurable long-term target (AOSIS, MISC.5/Add.2 and shared vision workshop);
- (m) Not be a starting point for a “top-down” approach in distribution of commitments on reduction of GHG emissions among the countries (United States, MISC.1; Russian Federation, MISC.5); be considered as a non-binding and aspirational shared “vision” which will show a pathway toward the ultimate solution to climate change (Japan, MISC.2 and MISC.5/Add.2);
- (n) Expand the definition of “dangerous levels” of GHG emissions to include a focus on the “tipping points” for abrupt climate changes; immediate “fast start” strategies should be initiated to mitigate the threat of crossing the “tipping points” (Mauritius, Micronesia (Federated States of), MISC.1);
- (o) Incorporate cost-effective emission scenarios, chosen for each of the goals to be considered (Norway, MISC.1);

- (p) Be reviewed no later than 2015 and on a regular basis thereafter (AOSIS, MISC.5/Add.2);
 - (q) Include both long-term and mid-term emission reduction targets/milestones (Ukraine, MISC.1/Add.2; Brazil, New Zealand, Norway, MISC.5); be linked to a medium-term target for emission reductions by Annex I Parties (India, MISC.5/Add.1) that help define the trajectory for emission reductions towards the long-term emission reduction goal (Australia, MISC.5/Add.2). In particular, Parties proposed that:
 - (i) The long-term emission reduction target be linked to a medium-term target for emission reductions by Annex I Parties (India, MISC.5/Add.1; African Group, India, shared vision workshop);
 - (ii) An integral part of a mid-term ambition for constraining global emissions should be a collective mid-term emission reduction goal for developed countries (Australia, MISC.5/Add.2);
 - (r) Mid-term absolute emission reduction commitments for all Annex I Parties, that are measurable, reportable and verifiable (G77 and China, MISC.5/Add.2);
 - (s) Define clear mid-term targets with fair contributions from all Parties, according to the principle of common but differentiated responsibilities and respective capabilities (EC and its member States, MISC.5/Add.1).
27. On the **level of stabilization or temperature increase**, Parties proposed:
- (a) Stabilization of GHG gas concentrations well below 350 ppm CO₂ eq and temperature increases limited to below 1.5° C above the pre-industrial level (AOSIS, Micronesia (Federated States of), MISC.5/Add.2; AOSIS, shared vision workshop);
 - (b) An increase in average temperature well below 2 °C compared with pre-industrial levels (Bangladesh, shared vision workshop);
 - (c) Limiting global average temperature increase to 2 °C above pre-industrial levels (Iceland, EC and its member States, MISC.1 and MISC.5/Add.1; Norway, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5; Madagascar, MISC.5/Add.2; EC and its member States, shared vision workshop);
 - (d) Making efforts to ensure that global mean temperature increase does not increase from 2.0 to 2.4 °C (LDCs, MISC.1);
 - (e) Limiting further global temperature rise to the lowest level possible by setting global GHG emission reduction goals in line with the suggestions in the IPCC AR4 (Pakistan, MISC.1/Add.1);
 - (f) Stabilizing GHG concentrations as far below 450 ppm CO₂ equivalent as possible (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5);
 - (g) Stabilizing GHG concentrations in the atmosphere at the lowest levels assessed by the IPCC to date (EC and its member States, MISC.1);
 - (h) Science can provide no single reference point at which a rise in the average global temperature would cross a boundary between safe and dangerous anthropogenic interference with the climate system. Determining ‘dangerous anthropogenic interference with the climate system’ in relation to Article 2 of the UNFCCC involves value judgements (Australia, MISC.1/Add.2).

28. On the **peaking time of global emissions**, Parties proposed that they should peak:
- (a) In 2000–2015 (Maldives on behalf of LDCs, MISC.1); by 2015 (AOSIS, MISC.5/Add.2; AOSIS, shared vision workshop);
 - (b) In the next 10–15 years (EC and its member States, MISC.1; New Zealand, MISC.5);
 - (c) Between 2015 and 2020 (Madagascar, MISC.5/Add.2; Bangladesh, shared vision workshop); by 2020 (EC and its member States, Canada, MISC.5/Add.2; EC and its member States, shared vision workshop);
 - (d) In the next 10–20 years (Japan, MISC.2 and MISC.5/Add.2).
29. On the **quantification** of a long-term global goal for emission reduction, Parties proposed that:
- (a) The year 2050 is an appropriate target date for the long-term global goal (Australia, MISC.1/Add.2);
 - (b) Global CO₂ emissions should be reduced by more than 85 per cent by 2050 (AOSIS, MISC.5/Add.2; AOSIS, shared vision workshop);
 - (c) Global emissions need to be reduced to well below half of the levels in 2000 by the middle of the twenty-first century (EC and its member States, MISC.1); by at least 50 per cent from 1990 levels by 2050 (EC and its member States, MISC.5/Add.1; Madagascar, MISC.5/Add.2; African Group, EC and its member States, shared vision workshop);
 - (d) There should be at least a 50 per cent reduction of global emissions by 2050 (Ukraine, MISC.2/Add.1; Japan, Russian Federation, MISC.5; Canada, Japan, MISC.5/Add.2; Japan, shared vision workshop);
 - (e) By 2050, global average GHG emissions per capita should be reduced to around 2 t CO₂ eq (EC and its member States, MISC.5/Add.1); Annex I Party targets should also be noted and reported in per-capita terms (India, MISC.5/Add.1);
 - (f) The goals could be tied to specified levels of atmospheric concentrations of GHGs (Norway, MISC.1);
 - (g) The target be expressed as a percentage by which Parties aim to collectively restrain their emissions by a certain date, and a base year against which this ambition is measured (Australia, MISC.5/Add.2);
 - (h) A long-term goal should also be quantified in terms of the changes in the structural economic system, consumption patterns in developed countries, and volume of technologies to be transferred free and unencumbered by intellectual property rights (IPRs) to developing countries (Bolivia, MISC.5/Add.2);
 - (i) An alternative, equity-oriented approach should be adopted (Algeria, MISC.5/Add.2).
30. On **contribution by different groups of countries** to the achievement of the long-term goal, Parties proposed that:
- (a) Developed countries need to continue to take the lead in reducing global GHG emissions (EC and its member States, MISC.1; Japan, Singapore, MISC.2; Japan, MISC.5/Add.1) and agree to economy-wide targets (Australia, MISC.5/Add.2);
 - (b) Developed countries bear full responsibility (Bolivia, MISC.5 Add.2);

- (c) Deeper absolute reductions in emissions are required from developed countries (Brazil, MISC.5) by 2030 and 2050 (G77 and China, MISC.5/Add.2) in order to make carbon space for developing countries (China, MISC.5/Add.2);
- (d) The following ranges of emission reduction commitments should be adopted by developed countries as a group:
 - (i) Annex I Parties, as a group, would need to reduce their GHG emissions by more than 40 per cent of 1990 levels by 2020, and more than 95 per cent by 2050 (AOSIS, Micronesia (Federated States of), MISC.5/Add.2; AOSIS, shared vision workshop) through a second and subsequent commitment periods under the KP in accordance with Article 3.9 of the KP (Pakistan, MISC.5/Add.2)
 - (ii) Emission reduction commitments for developed countries as a group in the range of 25–40 per cent below 1990 levels by 2020 (EC and its member States, MISC.1; Madagascar, China, MISC.5/Add.2; African Group, Brazil, shared vision workshop); in the order of 30 per cent by 2020, through domestic and international efforts, compared with 1990 (EC and its member States, MISC.5/Add.1 and shared vision workshop);
 - (iii) Emission reduction commitments for developed countries as a group in the range of 75–85 per cent below 1990 levels by 2050 (Madagascar, MISC.5/Add.2);
 - (iv) Mid-term goals for Annex I Parties of at least 25–40 per cent reductions below 1990 levels by 2020 (Brazil, MISC.5; China, shared vision workshop), with further reductions through policies and measures that promote sustainable lifestyles (India, MISC.5/Add.1);
 - (v) Indicative range of emissions for Annex I Parties as a group of 25–40 per cent below 1990 levels by 2020, in the context of a global goal and agreement that has comparable effort from all developed countries and NAMAs from developing countries that reduces their aggregate emissions in the range of 15–30 per cent below baseline (New Zealand, MISC.5);
- (e) All Parties should commit to a long-term global goal for reducing emissions by at least 50 per cent by 2050 (Canada, MISC.5/Add.2);
- (f) All countries are required to take mitigation measures based on the principle of common but differentiated responsibilities and respective capabilities with an enlightened sense of international solidarity (Japan, MISC.5/Add.2);
- (g) As many countries as possible, including all major economies, should agree to deliver national mitigation actions. Individual commitments would differ according to national circumstances (Australia, MISC.5/Add.2);
- (h) As a group, non-Annex I Parties would need significant deviations from baseline over comparable periods (AOSIS, MISC.5/Add.2 and shared vision workshop);
- (i) There is a need for substantial deviations from baseline (business-as-usual) emissions in several developing regions in addition to the absolute emission reduction commitments of 25–40 per cent by industrialized countries by 2020 (EC and its member States, MISC.1); the most advanced among them would have to reduce their emissions by 15–30 per cent below business as usual. The level of efforts by developing countries should reflect aspects of capability, responsibility, mitigation potentials and national circumstances (EC and its member States, MISC.5/Add.1 and shared vision workshop);

- (j) On a longer term, by 2050, figures suggest that non-annex I Parties will have to reduce by 25 per cent their global emissions compared with the year 2000 (absolute reduction) (Madagascar, MISC.5/Add.2);
- (k) Building on their current domestic efforts, non-Annex I Parties should implement NAMAs, supported by finance, technology and capacity-building, in a measurable, reportable and verifiable manner (G77 and China, MISC.5/Add.2), with a view to deviating emissions trends from the baseline (Brazil, MISC.5; Chile, MISC.5/Add.2);
- (l) Concrete measurable, reportable and verifiable actions on the part of the Annex I Parties to enhance the implementation of the convention could be aided by enhanced voluntary actions by the developing countries (Pakistan, MISC.5/Add.2);
- (m) For developing countries the only way to contribute to a long-term global goal for emissions reductions would be through the pursuit of sustainable development, that is, the integration of climate change considerations in socio-economic development planning (Philippines, MISC.1).

2. Input by observer organizations

31. Observer organizations have shared concrete ideas and proposals on a long-term global goal. For example:

- (a) Global temperature rise should be limited to 2 °C (ITUC); as far below 2 °C as possible and reduce temperatures from their peak as fast as possible (CAN);
- (b) Global emissions will need to peak within the next 10 years and decline thereafter (CAN);
- (c) Emission cuts of 85 per cent (ITUC) or 80–95 per cent (CAN) from 1990 levels are required by 2050; a global long-term target of at least a 50 per cent reduction by 2050 based on 1990 levels (TNC); the level of ambition must be based on the AR4 and more recent scientific data (CAN);
- (d) Developed countries should reduce their emissions by at least 25–40 per cent from 1990 levels by 2020 (CAN, ITUC);
- (e) Developing countries will need to contribute adequately through substantial deviations from their business-as-usual baseline by 2020 and the shared vision must recognize that this can only be achieved with financial, technological and capacity-building support, in accordance with the Convention's principles (CAN);
- (f) The choice of figure for the “goal” should be made as part of a package in relation to undertakings by developed countries on emission reduction, the expected role of developing countries in relation to emissions, and the provision of technology, finance and capacity-building (TWN);
- (g) A long-term global goal for emission reductions defined in terms of the mitigation (and adaptation) potential of technologies, with specific goals for the transfer and deployment of technologies in developing countries (TWN);
- (h) Parties should base actions on periodic reviews on QELROs and mitigation actions to ensure that the ultimate objective is met. The first review should be in 2014 and be based on the findings of the Fifth Assessment Report of the IPCC (CAN).

III. Enhanced action on mitigation of climate change

32. In addition to the assembly of ideas and proposals presented below, the discussion on this element of the BAP is also reflected in the summaries prepared by the Chair of the AWG-LCA. Please refer to document FCCC/AWGLCA/2008/6, paragraphs 12–27, document FCCC/AWGLCA/2008/11, paragraphs 13–26, and document FCCC/AWGLCA/2008/13, paragraphs 14–28.

A. Measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them, taking into account differences in their national circumstances

1. Input by Parties

33. On **leadership in emission reduction**, Parties noted that all developed countries should take the lead in modifying longer-term trends in emissions, consistent with the objective of the Convention (Argentina, Colombia, EC and its member States, Indonesia, Norway, Philippines, MISC.1; Pakistan, MISC.1/Add.1; EC and its member States, MISC.2; Argentina, Brazil, China, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5; AOSIS, Australia, Chile, EC and its member States, MISC.5/Add.2; AOSIS, shared vision workshop).

34. On the **nature** of national mitigation commitments or actions by developed countries, Parties proposed:

- (a) Establishing binding commitments (Pakistan, MISC.1/Add.1; AOSIS, MISC.5/Add.2), and deep and binding emissions cuts for developed countries in the context of a second commitment period under the KP (Argentina, MISC.5);
- (b) Considering a full range of options, e.g. national emissions caps, intensity targets, regulations, energy-efficiency commitments, and policy initiatives such as technology partnerships between Annex I countries and emerging economies (Canada, MISC.1/Add.2);
- (c) Introducing mid-term (China, MISC.5; Australia, MISC.5/Add.2; China, India, shared vision workshop) and long-term emission reduction targets with individual short-term benchmarks plans for each Party (Turkey, MISC.1) in absolute terms (Ukraine, MISC.2/Add.1);
- (d) Establishing individual commitments for Annex I Parties to achieve their quantified national emission reduction targets in terms of total volume of GHG emissions, setting the plural number of base years from the perspective of the fair assessment of the reduction (Japan, MISC.5);
- (e) Not introducing a collective range for reduction of emissions for a group of countries; the specified long-term goal should not be a starting point for a “top-down” approach in distributing commitments on reduction of GHG emissions among the countries (Russian Federation, MISC.5) (see also chapter II);
- (f) Applying the same “character” of various countries’ efforts (e.g. legally binding or voluntary) for all countries, whether developed or developing, although the substantive content may differ (United States, MISC.5);
- (g) Using or following a sectoral approach in setting targets or identifying actions (Norway, Turkey, MISC.1; Japan, Russian Federation, MISC.5; Canada, MISC.5/Add.2) (see also chapter III D);

- (h) Expanding carbon markets and enhancing the use of project-based mechanisms (Norway, Sri Lanka, MISC.1; Ukraine, MISC.2/Add.2), better including the LULUCF sector (Argentina, EC and its member States, MISC.1; Australia, Norway, Sri Lanka, Ukraine, MISC.2/Add.2) (see also chapters III C and III E);
- (i) Making voluntary but binding commitments that reflect countries' abilities and circumstances (Russian Federation, MISC.5);
- (j) That all developed countries should agree to economy-wide targets as part of the post-2012 outcome, representing a comparable mitigation effort taking into account national circumstances (Australia, Canada, MISC.5/Add.2);
- (k) Absolute economy-wide caps implemented through sectoral approaches in the first phase (Switzerland, MISC.5/Add.2);
- (l) Applying economic instruments (e.g. taxes on carbon-intensive activities, eco-labelling, appliance standards, fuel efficiency standards, the removal of subsidies for fossil fuels and the creation of incentives) to promote the use of renewable energy and energy efficiency measures in order to address demand-side management (AOSIS, MISC.5/Add.2);
- (m) Using flexible mechanisms as a supplementary measure and including LULUCF as part of the national target, while ensuring continuity and consistency with the rules under the first commitment period of the KP (Japan, MISC.5);
- (n) Considering wetlands conservation and restoration as options/activities for carbon sequestration (Belarus, Iceland, MISC.5/Add.2);
- (o) Meeting emission limitation/reduction commitments internally in developed countries and not through flexible market mechanisms (Bolivia, MISC.5/Add.2);
- (p) Equal involvement of all economic sectors including LULUCF and taking into account the absorption and cumulative capacity of forests regardless of their geographical location (Russian Federation, MISC.5/Add.2);
- (q) Annex I Parties undertaking commitments based on their historical responsibility (G77 and China, Pakistan, MISC.5/Add.2);
- (r) Recognizing technical potential for mitigation in the agriculture sector (New Zealand, MISC.5/Add.2).

35. On the **quantification of national actions and commitments** by developed countries, Parties proposed that they should:

- (a) Be over and above QELROs under the KP (Argentina, Philippines, MISC.1) to provide for additional deeper cuts and to create demands for the credits from developing countries (Republic of Korea, MISC.2 and FCCC/AWGLCA/2008/11);
- (b) Ensure that aggregated GHG emissions after 2013 do not exceed countries' QELROs while ensuring comparability of efforts (Japan, MISC.5/Add.2);
- (c) Be adopted by all developed countries as QELROs, regardless of whether a Party chooses to describe this as a "commitment" or an "action" (India, MISC.5/Add.1);
- (d) Provide for significantly deeper cuts than those proposed by the IPCC in its AR4 (Bolivia, MISC.5/Add.2);

- (e) That all Annex I Parties collectively, whether they are Parties to the KP or not, shall undertake commitments to reduce their GHG emissions by (see also chapter II):
 - (i) 25–40 per cent of their 1990 level by 2020 (Brazil, EC and its member States, MISC.1; EC and its member States, MISC.2; China, New Zealand, Norway, Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5; India, MISC.5/Add.1; China, India, shared vision workshop);
 - (ii) 10–40 per cent below 1990 levels by 2020 (Bangladesh, LDCs, MISC.1); 20 per cent by 2020 (Ukraine, MISC.2/Add.1); 40–95 per cent below 1990 levels by 2050 (Bangladesh, LDCs, MISC.1; China, MISC.5); 50 per cent by 2050 (Ukraine, MISC.2/Add.1);
 - (iii) 30 per cent by 2020, through domestic and international efforts, compared with 1990 (EC and its member States, MISC.5/Add.1 and shared vision workshop);
 - (iv) More than 40 per cent of their 1990 levels by 2020, more than 95 per cent by 2050 (AOSIS, MISC.5/Add.2 and shared vision workshop; Pakistan, MISC.5/Add.2) and well over 100 per cent of 1990 levels in the long term (Pakistan, MISC.5/Add.2);
 - (f) Include overall and individual targets for developed countries for 2020 consistent with keeping the global goal to be defined by a Copenhagen agreement (EC and its member States, MISC.5/Add.1) (see also chapter II);
 - (g) Including national mid-term ambitions early in 2009 (Australia, MISC.5/Add.2);
36. On **comparability of efforts and national circumstances**, Parties proposed that:
- (a) Annex I Parties that are not Parties to the KP shall maintain quantified emission reduction targets that would be comparable to the commitments under the KP undertaken by developed country Parties (China, MISC.5);
 - (b) Criteria/key indications/factors shall be used to define relative levels of comparative effort in the larger global effort to address climate change in short- and long-term time frames (Iceland, MISC.1; Canada, MISC.1/Add.2; Turkey, New Zealand, MISC.5);
 - (c) Criteria of comparability should be defined to ensure that the commitments of Annex I Parties reflect their level of development and capacity to cope with climate change (Brazil, shared vision workshop);
 - (d) Energy efficiency or emission intensity as well as other sectoral and national economic and social indicators can serve as indicators in measuring comparability, with due consideration to the marginal abatement costs and total abatement costs as percentage of Gross Domestic Product (GDP) (Japan, MISC.2, MISC.5 and MISC.5/Add.2); also relevant are per capita effort and aggregate economic costs (Australia, MISC.5/Add.2);
 - (e) Historical responsibilities for climate change and for building the present stock of GHG in the atmosphere (Brazil, Turkey, MISC.5; AOSIS, Bolivia, MISC.5/Add.2; Brazil, India, shared vision workshop), carbon embedded in infrastructure and other assets; national levels of capital, technology and capabilities; and the need for guarantees that financing and technology provided and transferred to developing countries should be used in determining the burden sharing for mitigation (Bolivia, MISC.5/Add.2);
 - (f) Due consideration should be given to comparability of efforts between large and small Parties and to the benefits of sectoral mitigation potentials based on a comparable methodology employed across Annex I Parties (Iceland, MISC.5 and MISC.5/Add.2);

- (g) Equitable quantified national reduction targets should be set based on a sectoral approach and aggregated in a “bottom up” manner using indicators such as energy efficiency or GHG intensity (Japan, MISC.1/Add.1) and considering national initiatives and measures in various sectors (Russian Federation, MISC.5) (see also chapter III D);
- (h) The “nationally determined” commitments or actions must reflect comparable efforts among all developed country Parties ensured through negotiations (India, MISC.5/Add.1);
- (i) Comparability of efforts among developed countries should be considered in terms of emission reductions targets/commitments; relevant differences in national circumstances should be acknowledged (EC and its member States, MISC.5/Add.1; Australia, MISC.5/Add.2); comparability also includes such factors as capability, responsibility, mitigation potential and cost-effectiveness (EC and its member States, MISC.5/Add.2);
- (j) Any Annex I Party that is not a Party to the KP should undertake all necessary efforts (Bolivia, MISC.5/Add.2);
- (k) The tonnes of CO₂-equivalent reduced in absolute terms must be comparable, to enable Annex I Parties as a group to remain within the range indicated by the lowest stabilization level assessed by the IPCC (South Africa, MISC.5/Add.2);
- (l) National circumstances should be taken into account:
 - (i) In defining relative levels of comparable effort (Iceland, MISC.1; Canada, MISC.1/Add.2; Turkey, New Zealand, MISC.5);
 - (ii) In defining a convenient base year (Japan, Turkey, MISC.1);
 - (iii) For Parties “with economies that are highly dependent on income generated from the production, processing and export and/or consumption of fossil fuels” (Article 4.10 of the Convention) (Russian Federation, Singapore, MISC.5) (see also chapter III E);
 - (iv) In determining the extent of individual commitments as part of a post-2012 outcome (Australia, MISC.5/Add.2);
- (m) Methodologies used for calculation of reduction potentials and setting quantified national GHG emissions reduction targets should allow the setting of equitable burden sharing which is measurable, reportable and verifiable (Japan, MISC.1/Add.1). Such methodologies should aim not to restrict the flexibility of policy responses and take into account all GHGs, as well as sinks and sources (Australia, MISC.2/Add.1);
- (n) The reduction target of each Annex I Party should be set on the basis of national circumstances in a manner which ensures comparability of mitigation efforts of each country (Japan, MISC.5);
- (o) Sectoral energy efficiency, carbon intensity and analysis of mitigation potential should be included in the methodologies used to ensure comparability of emission reduction targets among developed countries (Japan, MISC.5/Add.2);
- (p) The assessment of comparability needs to be made by both the COP and the Conference of the Parties serving as the meeting of the Parties (CMP) for Annex I Parties, facilitated by a technical panel on comparability that would assess the information provided by Annex I Parties in their annual national communications and report its findings to the COP and the CMP for further action (South Africa, MISC.5/Add.2);

- (q) Comparable effort should be based on setting targets for emission reductions with the same base year time frames as under the KP; a third-party review of inventories and comparable compliance requirements should be included (AOSIS, MISC.5/Add.2);
 - (r) Any arrangement for quantified emission limitation objectives established under paragraph 1 (b) (i) of the BAP should not undermine the commitments of the Annex I Parties under the KP (AOSIS, MISC.5/Add.2);
 - (s) The issue of “comparability” involves defining a number of factors, including: what constitutes all developed country Parties; consideration of relevance of actions; assessment of efforts; the domestic character/status of efforts; national circumstances; purposes of efforts; actual implementation; whether action should be done domestically, abroad, jointly or in the form of assistance to developing countries; and consideration of the relevant time period for implementing and assessing efforts (United States, MISC.5/Add.2).
37. On **what needs to be measured, reported and verified**, Parties proposed the following:
- (a) Commitments under the Convention and associated actions by Annex I Parties (China, MISC.5);
 - (b) Progress against commitments, for example regarding GHG emissions and removals, financial assistance and technology transfer (New Zealand, MISC.5); the extent to which emission limitation and reduction complies with a quantified emission limitation and reduction objective (Brazil, MISC.5);
 - (c) A set of target parameters of “clean development” subject to international verification (Russian Federation, MISC.5);
 - (d) Actions capable of achieving quantifiable emission limitations or reductions including actions for which outcomes are not directly measurable (Australia, MISC.5/Add.2);
 - (e) Measurement, reporting and verification system for major sectors should be introduced in order to promote effective actions from a long-term perspective; developed countries should incorporate complementary sectoral information, including sectoral indicators, in their annual inventory; this information should be reviewed periodically (Japan, MISC.5/Add.2);
 - (f) Cost and impact assessment of the mitigation actions, policies and measures, particularly in developing countries (Saudi Arabia, MISC.5/Add.2).
38. Parties shared the following ideas and proposals on **how to measure, report and verify**:
- (a) Follow a uniform methodology for reporting and decide on the frequency of reporting (Bangladesh, MISC.1);
 - (b) Follow Convention guidelines for Annex I inventories (Brazil, MISC.5);
 - (c) Build upon existing reporting and review processes, based on the requirement under Article 12 of the Convention and associated COP decisions. (EC and its member States, MISC.5/Add.1; Australia, EC and its member States, EIG, MISC.5/Add.2) and strengthen reporting requirements in key areas (South Africa, MISC.1/Add.1; China, New Zealand, United States, MISC.5; Australia, MISC.5/Add.2); provide annual national inventories, verified by expert review teams (AOSIS, MISC.5/Add.2);

- (d) Build on the current ‘in-depth review’ procedures for national communications of Annex I Parties using third-party review of measured, reported and verified actions (Australia, MISC.5/Add.2);
- (e) Follow the requirements under Articles 5, 7 and 8 of the KP (and associated decisions of the Conference of the Parties serving as the meeting of the Parties to the KP) (New Zealand, MISC.5; South Africa, MISC.5/Add.2); with arrangements similar to those for QELROs under the KP (AOSIS, MISC.5/Add.2);
- (f) Draw on the experience of the Compliance Committee of the KP (Bangladesh, Indonesia, LDCs, Micronesia (Federated States of), MISC.1);
- (g) Develop a robust compliance system built on the existing mechanisms, that can address issues of non-compliance flowing from the measurement, reporting and verifying process (South Africa, MISC.5/Add.2);
- (h) Include verification of the impacts assessment and efforts to reduce the adverse impacts of actions, policies and measures on developing countries and of compliance with the goal of avoiding or minimizing such adverse impacts (Saudi Arabia, MISC.5/Add.2);
- (i) Establish a facilitative process for the provision of information by Parties on their actions in fulfillment of the BAP, thus allowing Parties to implement and strengthen actions; not imply additional commitments; ensure differentiation of measurement, reporting and verification of the commitments of developed countries and mitigation actions by developing countries; which is not “judicial” in nature or a “compliance” process (EIG, MISC.5/Add.2);
- (j) Take into account experience gained under other international agreements and mechanisms, such as the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) (Bangladesh, Indonesia, LDCs, Mauritius, Micronesia (Federated States of), MISC.1);
- (k) Fix a reference point or benchmark against which the reduction in GHG emissions has to be measured, verified and reported, and provide guidance on whether reductions should be indirect or economy-wide (Bangladesh, MISC.1).

2. Input by observer organizations

39. Proposals relating to mitigation actions and commitments by developed countries include:
- (a) Introducing a system for of scaling up mitigation effort through different approaches that are appropriate for different countries and interventions. These approaches could include a combination of interventions such as taxes, efficiency standards and labels, and market-based cap and trade schemes, and could be defined by host countries in relation to specific country circumstances, technology and institutional capacity (World Bank, MISC.3);
 - (b) Adopting economy-wide quantified emissions limitation and reduction commitments (QELROs) in developed countries in order to reduce emissions from 1990 levels by at least 25–40 per cent by 2020 and 80–95 per cent by 2050. Most of the effort must be made domestically; international transport emissions should be included in the target to reduce global emissions by at least 80 per cent by 2050 from 1990 levels (CAN);
 - (c) Setting absolute reductions in developed countries, achieved via sectoral emission targets, via inclusion of energy intensive sectors and sectors with cross-boundary emissions, via taxation and mandatory measures, and via establishing a market value for

emissions; strengthening the clean development mechanism (CDM), and linking the EU-ETS with other carbon markets. Developed countries should fund technology and adaptation (GLOBE);

- (d) Considering the EU's commitment of a 30 per cent cut from the 1990 levels by 2020 as a benchmark for developed country commitments (ITUC);
- (e) Compiling a menu of existing (successful) and potential industrial energy-efficiency policies and measures, complemented by an assessment of their scalability, transferability and full costs (UNIDO/IAEA, MISC.6);
- (f) Calculating sectoral reduction potential, without resorting to "flexibility measures", in accordance with internationally agreed criteria (Keidanren);
- (g) Realizing the synergies between mitigation measures, employment generation and poverty reduction; promoting enterprise; implementing employment and labour market policies; and adopting policies for just transitions for enterprises and workers negatively affected by mitigation measures (ILO, MISC.6/Add.2);
- (h) Involving representatives of industry, of workers and of local governments in the sectors and localities affected by mitigation policies in measurement, reporting and verification (ILO, MISC.6/Add.2);
- (i) Differentiating the agricultural sector from the other sectors in terms of GHG emission reductions (IFAP).

B. Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner

1. Input from Parties

40. On the **sustainable development context of nationally appropriate mitigation actions by developing country Parties**, Parties noted that these actions should (see also chapter II):

- (a) Respect the development imperative of developing countries and their economic growth and take into account different national circumstances (Bangladesh, Brazil, Columbia, LDCs, Pakistan, Philippines, Saudi Arabia, Singapore, MISC.1; Argentina, China, Saudi Arabia, Singapore, United States, MISC.5; AOSIS, Algeria et al., G77 and China, MISC.5/Add.2);
- (b) Increase significantly in order to achieve global climate stabilization by moving to a low-carbon economy supported by technology, financing, and capacity-building to catalyse and maximize mitigation action (Argentina, MISC.5) to reduce GHG emission trajectories of emissions from developing countries to pursue a clean development path now, up to, and beyond 2012 (AOSIS, MISC.5/Add.2);
- (c) Provide for expanding access to renewable energy and energy efficient technologies as a key strategy for engaging developing countries in mitigation efforts (AOSIS, MISC.5/Add.2). Technologies that increase dependency on carbon-intensive fuel sources should be discouraged (AOSIS, MISC.5/Add.2);
- (d) Be seen as a matter of national energy security and as a means of meeting sustainable development aspirations for SIDS and LDCs (AOSIS, MISC.5/Add.2);
- (e) Be designed where possible to foster socio-economic and development co-benefits, for example with respect to agriculture (New Zealand, MISC.5/Add.2);

- (f) Be supported and enabled by technology, substantial and additional financial support and capacity-building from developed countries in a reliable and predictable manner (EC and its member States, Japan, Saudi Arabia, MISC.1; Argentina, G77 and China, Norway, Singapore, South Africa, MISC.5; AOSIS, MISC.5/Add.2), as well as by a global carbon market (EC and its member States, MISC.2), and in accordance with the national circumstances and capability of the receiving countries (Norway, MISC.5) and the principle of common but differentiated responsibilities and capabilities (EC and its member States, MISC.2);
- (g) Be conditional on the provision of prior financial and technical support by developed countries in accordance with Article 4.7 of the Convention (Saudi Arabia, MISC.1; Argentina, G77 and China, Norway, Singapore, South Africa, MISC.5; Bolivia, Indonesia, South Africa, MISC.5/Add.2);
- (h) Be recognized (EC and its member States, Norway, MISC.1; Brazil, Russian Federation, South Africa, MISC.5; EC and its member States, MISC.5/Add.1);
- (i) Be built on contributions by developing countries that have been already active in mitigation of GHG emissions in conjunction with pursuing broader development objectives (EC and its member States, MISC.5/Add.1).

41. In relation to **registration and accounting systems of the nationally appropriate mitigation actions by developing countries**, Parties proposed that:

- (a) A registry of nationally appropriate mitigation action by all developing countries should be established, supported and enabled by developed countries through the provision of the means of implementation (technology, financing and capacity-building) to developing countries in a measurable, reportable and verifiable manner (Republic of Korea, South Africa, MISC.5; EIG, South Africa, MISC.5/Add.2) in order to:
 - (i) Register voluntary and non-binding actions on a voluntary basis (Republic Korea, South Africa, MISC.5; AOSIS, EIG, South Africa, MISC.5/Add.2);
 - (ii) Serve as a basis of an institutional framework of recognizing domestic actions of developing countries as international mitigation actions in the post-2012 climate regime (Republic of Korea, MISC.5) and would enhance existing provisions of the Convention (South Africa, MISC.5);
- (b) The level of mitigation effort by developing countries is to be commensurate with the level of means of implementation received regulated either through price of carbon (for carbon market) or the level of mitigation actions registered (for public sources) (South Africa, MISC.5/Add.1);
- (c) Registration of voluntary pledges of NAMAs for all developing countries should be kept open up to 2020 or 2025 (South Africa, MISC.5/Add.2);
- (d) Pledging to implement actions/programmes/plans should be done in the context of specified support to enable implementation (South Africa, MISC.5);
- (e) A “tool box” (a list of mitigation actions) from which developing countries could choose can include SD-PAMs, REDD, programmatic CDM and no-lose sectoral crediting baselines (South Africa, MISC.5) (see also para. 42 (c) below);
- (f) Measurement, reporting and verification of actions should be developed under the registry (Republic of Korea, South Africa, MISC.5), including measuring sustainable

development benefits and climate co-benefits of the mitigation actions, and costs of actions (see also paras. 43–46 below);

- (g) Pledges to undertake take NAMAs should be recorded in an international registry held by the UNFCCC secretariat (South Africa, MISC.5; AOSIS, EIG, MISC.5/Add.2);

42. On the **nature of NAMAs by developing countries**, Parties proposed that:

- (a) These actions should lead to an appropriate/significant deviation from an emission baseline (EC and its member States, MISC.5/Add.1 and MISC.5/Add.2; Australia, Canada, South Africa, MISC.5/Add.2) (see also chapter II). This deviation should occur:
 - (i) By 2020 (Canada, EC and its member States, MISC.5/Add.2);
 - (ii) By 2020 for some regions and by 2050 for all regions (South Africa, MISC.5/Add.2);
 - (iii) Within a time frame consistent with the long-term goal (EC and its member States, MISC.5/Add.2);
 - (iv) Over an appropriate time period (AOSIS, MISC.5/Add.2);
- (b) The actions should/can:
 - (i) Be voluntary and non-binding and correspond to the capabilities of each Party (Brazil, MISC.1; South Africa, MISC.1/Add.1; Singapore, MISC.2; China, Republic of Korea, South Africa, MISC.5, AOSIS, MISC.5/Add.2));
 - (ii) Be distinct from the mitigation commitments of Annex I Parties (G77 and China, MISC.5/Add.2);
 - (iii) Reflect aspects of capability, responsibility, mitigation potentials and national circumstances (EC and its member States, MISC.5/Add.1);
 - (iv) Be more ambitious commitments by Parties with appropriate national capacities (Australia, MISC.5/Add.2) and at least for some developing countries (such as major emitters and emerging economies) of the same kinds of mitigation actions as developed countries (United States, MISC.5/Add.2);
 - (v) Be of the same legal “character” of various countries’ efforts (e.g. legally binding or voluntary) for all countries, whether developed or developing, although the substantive content may differ (United States, MISC.5);
 - (vi) Be different by the nature of actions and/or commitments for different groups of developing countries (Egypt, MISC.1; Australia, MISC.1/Add.2; EC and its member States, Japan, MISC.2; Japan, Russian Federation, Turkey, MISC.5);
 - (vii) Involve “fast start” strategies with existing technologies to mitigate climate change in the immediate term (Micronesia (Federated States of), MISC.5/Add.2);
 - (viii) Be binding and consistent with the principle of common but differentiated responsibilities and respective capabilities (Australia, Canada, MISC.5/Add.2);
 - (ix) Represent intensity targets, either binding or no-lose, implemented through a sectoral approach with support from developed countries (Switzerland, MISC.5/Add.2);

- (x) Be of a different nature as follows: NAMAs implemented unilaterally by a country (Australia, EC and its member States, MISC.5/Add.1); additional NAMAs supported and enabled by technology, financing and capacity-building; and further mitigation actions supported through the use of international carbon crediting mechanisms (EC and its member States, MISC.5/Add.2);
 - (xi) Be undertaken in global key emitting sectors in order to contribute to the effectiveness of the strengthened climate regime (EC and its member States, MISC.5/Add.1) (see also chapter III D);
- (c) Mitigation actions can include the following:
- (i) Sustainable development policies and measures (SD-PAMs) (Philippines, Singapore, MISC.1; EC and its member States, MISC. 2; Republic of Korea, South Africa, MISC.5; EC and its member States, MISC.5/Add.1 and MISC.5/Add.2) (see also chapter III E);
 - (ii) National low-carbon development plans and strategies, including specific energy policies aimed at improving the carbon and energy intensity (EC and its member States, MISC.2 and MISC.5/Add.1; South Africa, MISC.5), which result in ambitious deviations of emissions from business as usual (EC and its member States, MISC.2), building inter alia on existing climate action plans and strategies formulated by developing countries so far (EC and its member States, MISC.5/Add.1);
 - (iii) Increased participation in the carbon market (Uzbekistan, MISC.1; Canada, MISC.1/Add.2; EC and its member States, MISC. 2; Mongolia, MISC.2/Add.1; Republic of Korea, South Africa, MISC.5), including through carbon pricing (EC and its member States, MISC.5/Add.1), the CDM (Norway, MISC.5/Add.2) and a full range of abatement opportunities that are available under the flexibility mechanisms, such as CCS and REDD (Australia, Russian Federation, MISC.5/Add.2) (see also chapter III E);
 - (iv) Sectoral approaches (Sri Lanka, Uzbekistan, MISC.1; Canada, MISC.1/Add.2; EC and its member States, MISC.2; Australia, MISC.2/Add.2; Japan, MISC.5; EC and its member States, MISC.5/Add.1; Australia, Norway, MISC.5/Add.2);
 - (v) Sectoral trading systems as a national policy tool for mitigation (EC and its member States, MISC.5/Add.2);
 - (vi) Programmatic CDM (EC and its member States, MISC. 2; Japan, South Africa, MISC.5);
 - (vii) No-lose sectoral crediting baselines (EC and its member States, MISC. 2; South Africa, MISC.5);
 - (viii) National actions that are recognized and rewarded with carbon credit used for improving commercial viability of investment in mitigation actions (Republic of Korea, finance workshop) (see also chapter III E);
 - (ix) Technology deployment programmes or standards (e.g. for renewable energy), and energy efficiency standards (EC and its member States, MISC.5/Add.1).

43. **On measurement, reporting and verification of actions**, Parties proposed:

- (a) That the measurement, reporting and verification should:

- (i) Improve reporting on GHG emissions (Australia, MISC.5/Add.2);
 - (ii) Provide accurate and timely information and data (Norway, United States, MISC.5; EIG, MISC.5/Add.2);
 - (iii) Ensure continued effort sharing to enable assess progress against a long-term global goal (New Zealand, MISC.5);
 - (iv) Establish a process to facilitate the provision of information by Parties on their actions in fulfilment of the BAP (EIG, MISC.5/Add.2);
 - (v) Ensure that mitigation efforts from major emitting countries contribute to the overall reduction of GHG emissions in a measurable way, so that overall progress in achieving a global reduction in emissions can be assessed and effort can be compared based on appropriate benchmarks or indicators to measure progress (AOSIS, MISC.5/Add.2);
 - (vi) Significantly enhance and make more regular reporting of mitigation policies and emissions globally (United States, MISC.5/Add.2);
 - (vii) Not be used for deriving additional commitments. Measurement, reporting and verification should neither be of a “judicial” nature nor a “compliance” process entailing any sanction for Parties (EIG, MISC.5/Add.2);
- (b) That in order for nationally appropriate mitigation actions to be recognized, they need to be measured, reported and verified according to internationally agreed guidelines (United States, MISC.5/Add.2);
 - (c) Establishing, with international assistance, national measurement systems for groups of countries with binding national and sectoral targets to collect data and information and report to the COP on progress against commitments (Japan, MISC.5);
 - (d) Establishing a reliable framework for measuring, reporting and verifying (Norway, MISC.5);
 - (e) Developing a partnership to help ensure the elaboration of a robust system to measure, report and verify the results of NAMAs, and to provide technology, financing and capacity-building support (EC and its member States, MISC.5/Add.1);
 - (f) Sustained technological, financial and capacity-building support as well as sharing experience and expertise by Annex I Parties and international organizations (Australia, MISC.5/Add.2);
 - (g) Considering measurement, reporting and verification as individual concepts (i.e. excluding “measurement” as a requirement) or to consider measurement in relation to alternative indicators, such as inputs or implementation (Australia, MISC.5/Add.2);
 - (h) That developing countries should develop and maintain capability to report emissions inventories and report them on a regular basis (United States, MISC.5/Add.2), and that capacity-building for measurement, reporting and verification should be envisaged (EIG, MISC.5/Add.2).

44. On **what** needs to be **measured, reported and verified** in relation **to actions**, Parties proposed the following:

- (a) GHG emissions on regular, comprehensive and more frequent basis (Japan, Norway, United States, MISC.5; Australia, Canada, MISC.5/Add.2) for countries with economies

that account for the bulk of global GHG emissions (Japan, MISC.2; New Zealand, MISC.5), including regular and comprehensive inventories of emissions in key sectors (Australia, MISC.5/Add.2);

- (b) Implementation of sustainable development actions that reduce the rate of emissions growth (Brazil, MISC.5);
- (c) The sustainable development benefits and climate co-benefits of the mitigation actions, as well as costs of actions to be supported for pledged voluntary actions (South Africa, MISC.5);
- (d) Outcomes/results of NAMAs, i.e. aggregate emissions, at least for key emitting sectors (EC and its member States, MISC.5/Add.1);
- (e) Actions capable of achieving quantifiable emission limitations or reductions that can be extrapolated or projected (and if needed aggregated) based on agreed methodologies (Australia, MISC.5/Add.2);
- (f) Mitigation actions by developing countries, which provide for relative reductions or deviations from baseline (South Africa, MISC.5/Add.2);
- (g) Reporting to the COP on voluntary national action plans, including policies and measures for mitigation, by countries without binding commitments (other than major emitting countries, in particular LDCs and SIDS), while major developing countries should report on specific targets incorporated in the GHG emission inventories (Japan, MISC.5 and MISC.5/Add.2);
- (h) Information on specific targets incorporated in the GHG emission inventories by major developing countries (Japan, MISC.5/Add.2);
- (i) Actions that cannot be measured in terms of emission limitation or reduction outcomes but can deliver mitigation benefits (e.g. technology R&D, capacity-building, education, behavioural change and enabling environments) (Australia, MISC.5/Add.2);
- (j) Sectoral data including the introduction rate of technologies, energy efficiency, and stock/vintage of existing equipment (Japan, MISC.1/Add.1 and MISC.5);
- (k) Energy efficiency targets and renewable energy targets accompanied by concessionary financing from the international community to assist in achieving these targets (AOSIS, MISC.5/Add.2);
- (l) Specific data relating to reducing emissions from deforestation and forest degradation (REDD) (see chapter III C).

45. **Verification** of actions should/could:

- (a) Assess “compliance” with commitments under proper support by developed countries (New Zealand, MISC.5; Japan, MISC.5/Add.2);
- (b) Ensure continued effort sharing, and provide for data and information relating to national targets (Japan, MISC.5);
- (c) Build confidence among Parties, and ensure that the COP has adequate information to assess progress against the objectives of the Convention and the BAP (Australia, MISC.5/Add.2);
- (d) Be done by national entities and procedures (Brazil, MISC.1; South Africa, MISC.5). For voluntary pledged and “registered” actions, this can be done working to international

guidelines (South Africa, MISC.5 and MISC.5/Add.2). The details of verification will likely depend on whether the mitigation action is undertaken unilaterally or with international support (South Africa, MISC.5);

- (e) Occur at an international level under the auspices of the UNFCCC and build on existing independent expert review processes for Annex I Parties inventories (EC and its member States, MISC.5/Add.1);
 - (f) Allow independent (AOSIS, MISC.5/Add.2) third-party review (Australia, MISC.5/Add.2)
 - (g) Meet the highest standards for actions supported by measured, reported and verified technology, financing and capacity-building, and for actions capable of generating credits, then for national actions. Apply lighter overall verification requirements for LDCs (Australia, MISC.5/Add.2);
 - (h) Be identical among all Parties (United States, MISC.5/Add.2).
46. On **how to measure, report and verify actions**, Parties proposed that this should:
- (a) Be built on the experience under the Convention with measurement, reporting and verification (Norway, United States, MISC.5; EIG, MISC.5/Add.2), including IPCC methodologies (AOSIS, MISC.5/Add.2) and experience with national communications and on requirements for Annex I Parties and through enhancement and broadening of the implementation of Article 12 of the Convention (New Zealand, MISC.5; Australia, MISC.5/Add.2);
 - (b) Take into account lessons learned with the implementation of the KP, including by the Facilitation Committee and the Compliance Committee of the KP, (Bangladesh, Indonesia, LDCs, Micronesia (Federated States of), MISC.1; EC and its member States, MISC.5/Add.1);
 - (c) Be based on standardized reporting and review requirements across both developed and developing countries with lighter reporting requirements for LDCs (Australia, AOSIS, MISC.5/Add.2);
 - (d) Be different for the commitments of developed countries and mitigation actions by developing countries (EIG, MISC.5/Add.2);
 - (e) Be done at a national level following internationally agreed guidance, taking into account the agreed principles of transparency, accuracy, consistency, comparability and completeness; and verification needs to occur at an international level (EC and its member States, MISC.5/Add.1);
 - (f) Be done under the register of NAMAs (South Africa, Republic of Korea, AOSIS, MISC.5; South Africa, MISC.5/Add.2);
 - (g) Take into account the experience under other international agreements and mechanisms, such as the Montreal Protocol (Bangladesh, Indonesia, LDCs, Micronesia (Federated States of), MISC.1);
47. On **measurement, reporting and verification of support**, Parties proposed that it should:
- (a) Provide for more frequent and improved reporting on provision of financial and technology (Saudi Arabia, MISC.1; Brazil, G77 and China, New Zealand, South Africa, MISC.5);

- (b) Be based on the needs identified by developing countries for enhancing the implementation of their NAMAs (EC and its member States, MISC.5/Add.1);
- (c) Incentivize major developing countries to make demonstrative progress in achieving their intensity targets (Japan, MISC.5/Add.2);
- (d) Help in prioritizing financial and technical support (Australia, MISC.1/Add.2; New Zealand, MISC.5), based on criteria/indicators to prioritize support for different countries (New Zealand, MISC.5), taking into account the relative cost-effectiveness of financial assistance, in terms of the potential amount of emissions reduced per unit of money spent, and the degree of long-term impact in catalysing the transition to a low-carbon economy (Australia, MISC.1/Add.2);
- (e) Be based on new methods to accurately measure, report and verify provision of financial assistance and technology transfer (Saudi Arabia, MISC.1);
- (f) Be verified by means of an international register of contributions by developed and developing countries within their respective capacities (AOSIS, MISC.5/Add.2).

48. On **what should be measured, reported and verified relating to support**, Parties proposed:

- (a) Financial and technological assistance and support (Brazil, New Zealand, MISC.5), including funding that is new and additional to ODA (Brazil, MISC.5) coming from different categories of sources, including public funding, market-linked sources, and carbon markets (South Africa, MISC.5);
- (b) Financial contributions and technology transfer actions by developed countries and developing countries within their respective capacities (AOSIS, MISC.5/Add.2);
- (c) Technology transfer (New Zealand, MISC.5), development, application and diffusion, including in the form of different categories of costs (full, incremental), the practices and processes to enhance the absorptive capacity for technologies (South Africa, MISC.5);
- (d) What needs to be, and has been, accomplished through mitigation, adaptation and technology funding in terms of specific and identifiable needs at the country level, as well as areas where potential future technology would enable additional mitigation reported through improved national communication from non-Annex I Parties (New Zealand, MISC.5);
- (e) All relevant efforts to deliver support (EC and its member States, MISC.5/Add.1);
- (f) Additional financial support provided by major developing countries to measurable reportable and verifiable sector-wide emission reduction activities (Japan, MISC.5/Add.2);
- (g) Information on efforts to encourage technology, financing and capacity-building support from non-public sources (Australia, MISC.5/Add.2);
- (h) The cost and impact of mitigation actions, policies and measures, particularly on other developing countries; efforts to minimize these impacts (Saudi Arabia, MISC.5/Add.2);
- (i) Direct financial transfers and indirect contributions from developed countries through quantifiable technology and capacity-building support (South Africa, MISC.5/Add.2);
- (j) Concessionary financing from the international community to assist in achieving energy efficiency targets and renewable energy targets (AOSIS, MISC.5/Add.2).

49. On **how support should be measured, reported and verified**, Parties proposed:
- (a) Applying the current reporting system as a starting point for measuring, reporting and verifying technology, financing and capacity-building support, and revising reporting guidelines for all countries in order to promote consistency and comprehensiveness (Australia, MISC.5/Add.2);
 - (b) Regular national communication by developed countries; enhancing measurement, reporting and verification of technology through the use of performance indicators for technology transfer (South Africa, MISC.5/Add.2);
 - (c) Establishing a group with sub-groups for each energy- or carbon-intensive sector to support actions of developing countries by promoting transfer and dissemination of technology (Japan, MISC.5/Add.2).
50. On **contributions by different groups of countries** (see also chapter II A), Parties proposed that:
- (a) Contributions and mitigation measures of developing and developed countries are different in nature, as defined by the principle of common but differentiated responsibilities (Brazil, China, Panama, Singapore, MISC.5; G77 and China, MISC.5/Add.1);
 - (b) Legal obligations of Annex I Parties and non-Annex I Parties should be distinct in accordance with the provisions of the Convention (Brazil, China, MISC.5);
 - (c) Differentiation between non-Annex I Parties should not be introduced in any form (including amendments to the Convention or any of its annexes) with a view to establishing new categories of countries (G77 and China, MISC.5/Add.2);
 - (d) Responsibilities, actions and commitments of different groups of developing countries should be different, and need to be defined based on criteria/parameters that would reflect the level of their economic development, capabilities to act, contribution to the global GHG emissions, mitigation potential, etc. (Egypt, MISC.1; EC and its member States, Japan, MISC.2; Australia, MISC.1/Add.2; Japan, Russian Federation, Turkey, MISC.5);
 - (e) Differentiation among Parties in terms of, for example respective capabilities and economic development is necessary and should take into account the national capacities and special circumstances of Parties under the principles of common but differentiated responsibilities and equity and respective capabilities (Turkey, MISC.5/Add.2);
 - (f) An incentive mechanism should provide appropriate financial and technical support to undertake NAMAs for major emitting countries (AOSIS, MISC.5/Add.2);
 - (g) Specific needs and special circumstances of developing countries must be recognized (Rwanda, MISC.1; Argentina, Brazil, Singapore, MISC.5);
 - (h) The definition of developed and developing countries and/or Annex I and non-Annex I Parties and their contributions should be revised to reflect new developments of the world economy (Turkey, MISC.1; Australia, MISC. 2/Add.1 and MISC.5/Add.2; New Zealand, Russian Federation, United States, MISC.5; Turkey, MISC.5/Add.2);
 - (i) Large developing countries with large economies, resources and institutional capability to take mitigation, adaptation and technology-related actions cannot and should not be equated with LDCs even when all nations are required to lower GHG emissions (Bangladesh, LDCs, MISC.1; EC and its member States, MISC.2);
 - (j) Due weight should be given to the differing national circumstances of LDCs within the developing countries particularly in respect of institutional and human resource capacity,

generation of and access to technology, and capability to generate financial resources for investment and capacity-building (Bangladesh, LDCs, Rwanda, MISC.1; EC and its member States, MISC.2; Argentina, Brazil, Singapore, MISC.5);

- (k) New commitment structures should provide incentives for enhanced mitigation action by all major economies (Australia, MISC.5/Add.2);
- (l) Actions and commitments for different groups of countries should include:
 - (i) A full range of contributions from major emitters, including national emission caps, intensity targets, regulations, energy efficiency commitments, and policy initiatives, including innovative technology partnerships between Annex I Parties and “emerging economies” (Canada, MISC.1/Add.2);
 - (ii) Nationally appropriate mitigation commitments and NAMAs from all major emitting countries (Iceland, MISC.1; Australia, Canada, MISC.1/Add.2; EC and its member States, MISC.2; New Zealand, MISC.5), including their unilateral national action plans (EC and its member States, MISC.2), that make a significant contribution to reducing their emissions significantly from current emissions baselines (AOSIS, MISC.5/Add.2);
 - (iii) Economy-wide targets for advanced economies, binding national actions by developing countries in a measurable, reportable and verifiable manner, including cooperative sectoral approaches, and capacity-building support for less developed countries (Australia, MISC.5/Add.2);
 - (iv) A common determination by all major economies, in an appropriate time frame, to slow, stop and reverse the global growth in emissions and move towards a low-carbon society (Russian Federation, MISC.5) (see also chapter II);
 - (v) Binding targets for “GHG emissions per GDP” or “energy consumption per GDP” in major sectors and/or economy-wide, taking into consideration national circumstances, with specific reporting and verification requirements from particular groups of developing countries, such as major GHG-emitting countries (Japan, MISC.5 and MISC.5/Add.2);
 - (vi) Measurable, reportable and verifiable sector-wide emission reduction activities by and sectoral intensity targets for major developing countries (Japan, MISC.5/Add.2);
 - (vii) Voluntary national action plans, including policies and measures for mitigation, periodically reviewed and submitted to the COP, from developing countries other than major GHG-emitting countries (Japan, MISC.5 and MISC.5/Add.2);
 - (viii) Supported non-mandatory, voluntary actions and national action plans from particular groups of developing countries, such as low-GHG-emitting and vulnerable ones, including LDCs and SIDS (EC and its member States, MISC.2; Japan, MISC.5; EC and its member States, MISC.5/Add.2);
 - (ix) A requirement for non-Annex I Parties that have already become members of the Organisation for Economic Co-operation and Development (OECD) and those on a par with Annex I Parties in their economic development to take corresponding commitments as developed country Parties (Japan, MISC.2);
 - (x) Expanding the number of countries included in Annex II of the Convention based on current capacity to provide support under Article 4.3 and 4.4 of the

Convention, and establishing a new annex that would identify the most vulnerable Parties, with a graduation mechanism to allow such an annex the flexibility to continue to prioritize support over time (Australia, MISC.1/Add.2);

- (m) Circumstances of Parties “with economies that are highly dependent on income generated from the production, processing and export and/or consumption of fossil fuels” (Article 4.10 of the Convention) should be fully taken into account (Russian Federation, Singapore, MISC.5) (see also chapter III C);
- (n) Graduation of developing countries should be based on differentiation criteria, as follows: when a developing country has met the criteria of an upper group, that country should be graduated into the upper group (Japan, MISC.5).

2. Input from organizations

51. Proposals from organizations include:

- (a) Encouraging equitable contributions by developing economies, taking into account different national circumstances; creating incentives to encourage new flexible types of commitments, such as reducing deforestation and strengthening carbon sinks (GLOBE);
- (b) Developing an energy efficiency policy “toolkit”; devising a strategy and institutionalizing a system for regular collection of energy efficiency data (CSEND);
- (c) An inclusive agreement consistent with the principle of “common but differentiated responsibilities”; considering the EU’s commitment of a 30 per cent cut from the 1990 levels by 2020 as a benchmark for developed country commitments (ITUC);
- (d) In agreeing on the “measurable, reportable and verifiable” modalities in relation to paragraph 1 (b) (i) and 1 (b) (ii) of the BAP, the existing modalities under both the Convention and the Protocol with respect to mitigation, financing, technology transfer, and capacity-building should be used (South Centre, MISC.3/Add.1);
- (e) Addressing climate change in a way that harmonizes environmental protection with economic growth, involving participation of all major emitters; establishing total emissions targets for all states and regions deemed comparable to OECD member countries and equitable medium-term targets pertaining to the ratio of GHG emissions or energy consumption to GDP; applying sectoral approaches; reconsidering the base year; applying and disseminating existing technologies; and enhancing technical assistance to developing countries (Keidanren);
- (f) Realizing synergies between mitigation, employment generation and poverty reduction. Further, promoting enterprise, employment and labour market policies to encourage energy efficiency, renewable energy deployment and sustainable land use (ILO, MISC.6/Add.2);
- (g) Mobilizing resources and technology to enable developing countries to reduce GHG emissions (ITUC);
- (h) Developing countries should adopt NAMAs, according to their respective responsibilities and capabilities (CAN);
- (i) Establishing measurement systems and criteria for categories of pledged actions in order to collect and collate information, and reporting to the COP on progress (CAN).

C. Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

1. Inputs by Parties

52. Parties proposed that all elements of paragraph 1 (b) (iii) of the BAP should be treated with equal importance (Indonesia, Suriname, MISC.5/Add.2; China, India, forest workshop); priority should be given to REDD (Japan MISC.4/Add.1; Australia, EC and its member States, MISC.4/Add.1; Indonesia, Norway, forest workshop).

53. On the **context and objectives of policy approaches and positive incentives**, Parties proposed that they should:

- (a) Be flexible (Australia, Mexico, MISC.4/Add.1; Australia, Suriname, MISC.5/Add.2; China, EC and its member States, Norway, forest workshop; Malaysia, United States, forest workshop (short presentation));
- (b) Recognize different national circumstances (Colombia, MISC.1; EC and its member States, MISC.4; Australia, Mexico, Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5; Australia, MISC.5/Add.2) and capacity (Indonesia et al., MISC.5/Add.2);
- (c) Respect national sovereignty (Australia, Bolivia, MISC.5/Add.2);
- (d) Be based on fairness and equity (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5; Australia, MISC.5/Add.2; Malaysia, forest workshop (short presentation));
- (e) Be voluntary (Mexico, Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5; Australia, MISC.5/Add.2; Malaysia, forest workshop (short presentation));
- (f) Promote broad participation (Mexico, New Zealand, MISC.4/Add.1; Australia, Suriname, MISC.5/Add.2; China, forest workshop; Malaysia, forest workshop (short presentation));
- (g) Lead to additional, greater and permanent mitigation of emissions (EC and its member States, MISC.5/Add.1);
- (h) Address permanence, additionality and leakage (Australia, MISC.4/Add.1; Norway, MISC.5; AOSIS, MISC.5/Add.2);
- (i) Address social implications (Japan, MISC.4/Add.1; AOSIS, MISC.5/Add.2) and the rights and roles of rural communities, and native and indigenous peoples (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5; EC and its member States, MISC.5/Add.2), and promote the participation of these peoples and communities (Norway, MISC.5 and forest workshop; AOSIS, Bolivia, MISC.5/Add.2);
- (j) Promote sustainable forest management (Japan; Papua New Guinea, MISC.4/Add.1; Belize et al., Norway, MISC.5; AOSIS, Australia, EC and its member States, Suriname, MISC.5/Add.2; Malaysia, Norway, forest workshop) and be consistent with long-term sustainable land management (EC and its member States, forest workshop);
- (k) Promote synergy (EC and its member States, MISC.5/Add.2 and forest workshop), co-benefits (Australia, MISC.4/Add.1; EC and its member States, MISC.5/Add.2) and other societal benefits (EC and its member States, MISC.6/Add.2; United States, forest workshop); and contribute to the protection of biodiversity (EC and its member States, MISC.6/Add.2; Norway, forest workshop);
- (l) Be an important part of mitigation efforts by some developing countries (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5),

implemented in the context of sustainable development, to be supported and enabled by technology, financing and capacity-building (Brazil, MISC.5);

- (m) Encourage (Australia, MISC.4/Add.1; EC and its member States, forest workshop) or recognize (Mexico, MISC.4/Add.1) early action by developing countries;
- (n) Reward only additional efforts by developing countries and not lead to the offsetting of emissions of Annex I Parties (Brazil, MISC.5);
- (o) Entail the identification of a focal area within the UNFCCC secretariat, but not lead to the creation of a new bureaucratic structure (Brazil, MISC.5);
- (p) Incorporate lessons learned, including those from other international forums (Australia, MISC.5/Add.2), and relevant outcomes from demonstration activities (United States, Indonesia, forest workshop) and from voluntary carbon-market initiatives (Indonesia, forest workshop);
- (q) Be an integral element of enhanced action on mitigation in the BAP (Indonesia, MISC.5/Add.2);
- (r) Operate within the United Nations Declaration on the Rights of Indigenous Peoples (Bolivia, MISC.5/Add.2).

54. On the **nature of policy approaches**, Parties proposed:

- (a) A new Protocol under the UNFCCC, linked to the KP (New Zealand, MISC.4/Add.1);
- (b) A new flexible mechanism where, in one of two options, the emissions could be allocated in international markets. This allocation should not replace the obligation of Annex I Parties to reduce their emissions (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5);
- (c) A national-based mechanism (EC and its member States, MISC.6/Add.2), with some form of project-based mechanism (Colombia, MISC.1), as an initial step to aid countries to develop a national level approach (New Zealand, MISC.4/Add.1; Norway, MISC.5 and forest workshop), that requires effective forest governance structures in place (EC and its member States, MISC.5/Add.2);
- (d) A coherent combination of international policies and domestic measures (Argentina, MISC.5; United States, forest workshop), and integrated into the comprehensive strategy of national sustainable development (China, forest workshop);
- (e) A national and/or sub-national level policy, governance, enforcement and regulatory frameworks, and an international mechanism to administer REDD under the UNFCCC. These should include risk management strategies to deal with leakage, permanence and additionality. The strategies could function e.g. by withholding a percentage of credits or apply penalties if leakage occurs or if activities are not permanent or additional (Australia, MISC.5/Add.2);
- (f) That all Parties should adopt rules and practices for managed forests and agricultural lands, including through REDD, that incentivize emission reductions and removals (Canada, MISC.5/Add.2);
- (g) Options for exploring demand side measures relating to drivers of deforestation (e.g. export of timber and forest products), noting, however, possible implications for discriminatory trade measures (AOSIS, MISC.5/Add.2);
- (h) Measures for addressing REDD could be addressed at the national or subnational level (AOSIS, MISC.5/Add.2).

55. On **concrete policy approaches**, Parties proposed:
- (a) The establishment of a performance-based mechanism based on actual reductions in emissions (New Zealand, MISC.4/Add.1; Brazil, EC and its member States, Norway, MISC.5; EC and its member States, MISC.5/Add.2);
 - (b) The establishment of a performance-based arrangement under the Convention based on actual demonstration of the effective reduction of emissions from deforestation (Brazil, MISC.5);
 - (c) The setting of a fixed global target for reducing emissions from deforestation (Bangladesh, LDCs, MISC.1);
 - (d) The establishment of an overall voluntary approach separate from the CDM through the progressive implementation of three subsequent steps: 1. promoting readiness and capacity-building; 2. expanding implementation under the Convention through non-compliance and voluntary market instruments; and 3. implementing compliance-based market mechanisms (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5);
 - (e) Including forest degradation in the REDD mechanism; the definition of forest degradation should relate to the loss of carbon stocks in forest land; further work is required to develop methodologies for assessing degradation (AOSIS, MISC.5/Add.2); approaches to establish national reference levels should be flexible (AOSIS, Suriname, MISC.5/Add.2).
56. Parties presented several proposals and ideas on **the provision of positive incentives** (see chapter VI). Parties noted that such positive incentives should:
- (a) Be substantial, sustainable (Papua New Guinea, MISC.4/Add.1; Belize et al., Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua, and Panama, MISC.5) and predictable (Norway, MISC.5);
 - (b) Provide long-term financial flows (Norway, MISC.5) to stimulate long-term action (EC and its member States, MISC.4);
 - (c) Be based on the specific financial needs of REDD countries (Papua New Guinea, MISC.4/Add.1);
 - (d) Not be subject to stringent conditionality or linked to issues outside the scope of climate change (Papua New Guinea, MISC.4/Add.1);
 - (e) Precede the implementation of activities (in the case of financial resources) (Argentina, MISC.5);
 - (f) Be based on results (Norway, MISC.5; EC and its member States, MISC.6/Add.2) or ex-post results (Brazil, MISC.5);
 - (g) Integrate multi-benefits such as payments for environmental services with a view to enlarging funding sources (China, forest workshop);
 - (h) Be new and additional to financial resources provided for other activities (Brazil, MISC.5);
 - (i) Involve a better coordination of resource mobilization, including donors, NGOs and the private sector, in order to maximize access to, and the flexibility of, necessary funding sources (Papua New Guinea, MISC.4/Add.1 and MISC.5);

- (j) Be provided for relevant activities such as capacity-building, institutional strengthening, conservation, sustainable management of the forest and other means to increase the forest carbon stock (Mexico, MISC.4/Add.1; Suriname, MISC.5/Add.2); for a broad range of LULUCF activities besides REDD, such as conservation (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua, and Panama, MISC.5; AOSIS, MISC.5/Add.2); for technology transfer, improving governance and enforcement, and initiating national programmes and demonstration projects (New Zealand, MISC.4/Add.1); building REDD readiness (Norway, MISC.5);
 - (k) Ensure that income derived from REDD is directed in such a way as to ensure that benefits are maximized (e.g. so that local communities involved in REDD) (Australia, MISC.5/Add.2);
 - (l) Be proportional to the amount by which the emissions are below the reference emissions level for a year within the assessment period, or to the magnitude of removals above the reference removal level (EC and its member States, MISC.5/Add.1);
 - (m) Distribute the benefits from REDD appropriately and transparently among stakeholders, including local communities, in order to achieve sustainable reduction of emissions from the perspective of sustainable forest management (Japan, MISC.4/Add.1);
 - (n) Be based on a mechanism of direct compensation from developed to developing countries (Bolivia, MISC.5/Add.2);
 - (o) Be based on internalizing global benefits to the countries concerned of increasing levels of reduced deforestation, conservation, sustainable management of forests and afforestation/reforestation, and include a comprehensive set of modalities to provide positive incentives for reduced deforestation and conservation, sustainable forest management, afforestation and reforestation and increase in forest cover (India, MISC.5/Add.2);
57. On **what should be measured, reported and verified**, Parties proposed the following:
- (a) The reduction of emissions from deforestation (Brazil, MISC.5);
 - (b) Emissions and forest carbon stocks (Australia, MISC.4/Add.1; New Zealand, Norway, MISC.5);
 - (c) Emissions from deforestation and forest degradation and the differentials in carbon stock for increment in forest carbon stocks (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua, and Panama, MISC.5);
 - (d) Reference emissions (Brazil, MISC.5); reference levels, based on historical emission data (Norway, MISC.5);
 - (e) Permanence and leakage (Australia, MISC.5/Add.2);
 - (f) The effectiveness of actions, using guidance included in the annex to decision 2/CP. 13 (Indonesia, forest workshop);
 - (g) The effects on biodiversity (EC and its member States, MISC.4).
58. On **how to measure, monitor and verify**, Parties proposed:
- (a) Using a mechanism that is transparent and public (Bolivia, MISC.5/Add.2);
 - (b) Using methodologies included in the guidelines developed by the IPCC and approved by Parties (Norway, China, MISC.5; EC and its member States, MISC.6/Add.2);

- (c) Implementing monitoring based on national forest inventories (EC and its member States, MISC.4);
- (d) Using remote sensing (China, forest workshop);
- (e) Using a common methodology for all policy approaches, based on remote sensing and minimum ground verification, to achieve a defined confidence level (India, forest workshop);
- (f) Establishing robust and solid systems (Australia, MISC.4/Add.1 and MISC.5/Add.2; New Zealand, Norway, MISC.5), based on ex-post verification (EC and its member States, forest workshop) similar to the expert review system that Annex I countries have established under Article 8 of the KP (Norway, forest workshop);
- (g) Implementing national forest carbon monitoring and accounting systems (Australia, MISC.5/Add.2);
- (h) Establishing unbiased periodic reviews to assess the application of agreed modalities, including review of the data derived, to be organized by the secretariat (EC and its member States, MISC.5/Add.1).

59. On **capacity-building, readiness and demonstration** Parties proposed:

- (a) Implementing a stepwise approach to capacity-building, including a readiness phase, where developing countries are funded to develop capacity and institutional arrangements to monitor and report emissions and carbon stocks and implement REDD policy on the ground (Norway, forest workshop);
- (b) Encouraging demonstration activities at both subnational and national levels (China, MISC.5);
- (c) Integrating the work of relevant agencies, multilateral banks and diverse mechanisms (Mexico, MISC.4/Add.1);
- (d) Enhancing cooperation among international organizations and other relevant international processes (China, forest workshop), in particular further integrating relevant agencies within the United Nations system, such as the UNDP, UNEP and FAO, now operating as the “UN-REDD Initiative” (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5);
- (e) Inviting interested multilateral, bilateral and international agencies to use existing platforms such as the World Bank Forest Carbon Partnership Facility (FCPF) to coordinate programmes and initiatives (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5);
- (f) Actively supporting early actions for accumulating valuable experiences (China, forest workshop);
- (g) Encouraging partnerships between developing and developed countries in addressing climate change (Australia and Indonesia, Indonesia, MISC.5/Add.2).

60. On **what should be supported** in the areas of **capacity-building, readiness and demonstration**, Parties proposed the following:

- (a) The strengthening of local capacities (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5);
- (b) Institutional and capacity development (Japan, MISC.4);

- (c) The initiation, development and improvement of national forest inventories (EC and its member States, MISC.4; Norway, MISC.5);
- (d) Monitoring (Mexico, MISC.4/Add.1; AOSIS, MISC.5/Add.2; Norway, forest workshop) and reporting (Norway, forest workshop);
- (e) Data collection and use (Mexico, MISC.4/Add.1);
- (f) Development of country-specific parameters (Norway, forest workshop);
- (g) Technology transfer, capacity-building and assistance for the development of a sustainable forest industry (New Zealand, MISC.4/Add.1);
- (h) Different types of activities, such as establishing infrastructure for ecosystem protection and conducting public consultations (Mexico, MISC.4/Add.1);
- (i) South–South cooperation (Papua New Guinea, MISC.4/Add.1; Belize et al., MISC.5);
- (j) Greater readiness assistance to LDCs (EC and its member States, MISC.5/Add.1).

2. Input from observer organizations

61. On general principles relating to policy approaches and positive incentives, observer organizations proposed:

- (a) Focusing on deforestation and forest degradation (CAN, ForUM); encouraging retention of carbon in natural forests, and excluding the conversion of natural forests to industrial forests or plantations (CAN; FERN/FOEI/RFUK, WEDO/GCCA; TWS);
- (b) That they should be consistent with the 2 °C and the Convention goals (Greenpeace);
- (c) That they should be coherent with national and international trade policies (FERN/FOEI/RFUK, EIA);
- (d) That they should not be linked to the KP (GW);
- (e) That they should be voluntary (ED, GW) and flexible (CAN) and ensure broad participation (CAN, Greenpeace);
- (f) That they should be efficient (FERN/FOEI/RFUK, Greenpeace, NC);
- (g) That national approaches must be adopted (World Bank, MISC.3; CAN, ForUM, Greenpeace, GW, TNC), and subnational activities should also be examined as part of a strategy to develop a national level approach (CAN);
- (h) Ensuring co-benefits in respect to poverty alleviation, decent job creation and rural development needs (ITUC); applying mandatory operating principles and requirements (HSI) to maximize biodiversity co-benefits (Greenpeace, HSI, TWS);
- (i) That these approaches and incentives must enhance policies and objectives developed under the CBD (CBD, MISC.6/Add.2), and adhere to the principles of relevant international agreements and declarations (ForUM);
- (j) Maximizing environmental, social and economical benefits (CAN); and addressing social implications (ITUC);
- (k) Promoting sustainable forest management (GW, ITUC, TWS);

- (l) Recognizing and respecting the rights (Greenpeace, GW, ITUC, TNC, RFUK, WWF), and ensuring full and effective participation by indigenous peoples and local communities in all stages of decision-making (ILO, MISC.6/Add.2; CAN, Christian Aid/Heinrich Böll Foundation, FERN/FOEI/RFUK, RFUK);
 - (m) That these approaches and incentives should be accompanied by deeper commitments from industrialized countries (CAN, Greenpeace, RFUK); and should not be used for offsetting Annex I Parties commitments (FERN/FOEI/RFUK, TWS);
 - (n) Including projects that end or prevent emissions from peatland loss (drained areas) and also areas deforested since 1990 with still substantial carbon stocks (Wetlands Int.);
 - (o) Recognizing and supporting the necessary policy, legal and institutional reforms (FERN/FOEI/RFUK);
 - (p) That they should not be part of the CDM (CAN);
 - (q) That they must address international leakage (CAN) and deal with permanence, additionality (ED) and baseline uncertainties (Greenpeace, TWS).
62. On positive incentives, organizations proposed:
- (a) Reviewing the different existing financing mechanisms by broadening their scope to be more inclusive of agriculture and forestry sectors, simplifying their procedures and making them more flexible (FAO/IFAD, MISC.6);
 - (b) That significant and reliable strings of funding must be provided (CAN, Greenpeace, WWF);
 - (c) That capacity-building should be supported (ILO, UNEP, MISC.6/Add.2; ED, TWS);
 - (d) Establishing minimum standards for benefit sharing, developed with full and effective participation of indigenous peoples and local communities (ITUC, RFUK);
 - (e) That transfers of funds in REDD schemes must be transparent and open for public scrutiny (ForUM);
 - (f) That synergistic policies and incentives for forest should be stimulated through Global Environment Facility (GEF) (UNU, MISC.3);
 - (g) That it should be fund-based (GW);
 - (h) That market and non-market should not be considered mutually exclusive (HSI);
 - (i) A hybrid market-linked fund, with a governance structure similar to that of the Montreal Protocol, should be established (Greenpeace);
 - (j) Such incentives should be financed by public funding (FERN/FOEI/RFUK);
 - (k) That funding should be additional to ODA (WWF), linked to deep domestic emission reductions by Annex I countries, and tied to strong requirements for good governance (CAN).
63. On measurability, reportability and verifiability, organizations proposed:
- (a) Three simultaneous approaches for reference emission levels (HSI);
 - (b) Protecting integrity against the uncertainty of measurements (CAN);

- (c) Public and annual reporting of all stores, sinks and sources (HSI), using the five carbon pools of the IPCC to determine stocks and losses for forests (Wetlands Int.); all significant sinks, sources and emissions (GW) should be reported (CAN);
- (d) That remote sensing methodologies should be coupled with ground-based measurements for robust assessment of changes in deforestation and forest degradation (CAN);
- (e) That gross accountancy methodology should be used for measuring emissions (CAN);
- (f) That data should be monitored by independent third parties, at both the global and national levels (ForUM); and that independent complaint and conflict-resolution mechanisms should be established (CAN, ForUM, RFUK);
- (g) Measuring positive and negative social and environmental impacts (GW, WWF, TWS), including impacts on local communities, including indigenous peoples (Christian Aid, FERN/FOEI/RFUK) with respect to income, employment, migration and cultural identity (ILO, MISC.6/Add.2);
- (h) Ensuring participation of local and indigenous communities (ILO);
- (i) That a system of criteria and indicators be established to address the synergistic value of sustainable forest management projects (CBD, MISC.3).

D. Cooperative sectoral approaches and sector-specific actions to enhance implementation of Article 4, paragraph 1 (c), of the Convention

64. Parties referred to cooperative sectoral approaches and sector-specific actions as one of several tools for enhancing action in both developed and developing countries.

65. On **the objective** of sectoral approaches and sector-specific actions, Parties proposed that such approaches and actions should:

- (a) Be consistent with the principle of common but differentiated responsibilities and respective capabilities (EC and its member States, Japan, MISC.4; Indonesia, MISC.4/Add.1; Norway, MISC.5) (see also chapter II);
- (b) Enhance implementation of Article 4, paragraph 1 (c), of the Convention (China, MISC.1 and MISC.5; Indonesia, MISC.4 Add.1; G77 and China, Saudi Arabia, sectoral approaches workshop);
- (c) Contribute to enhancing measurable, reportable and verifiable actions (Indonesia, MISC.4 Add.1);
- (d) Involve a critical mass of Parties that account for most of the GHG output from a particular sector (United States, MISC.1);
- (e) Consider possible cross-sectoral synergy and impacts in order to achieve mutually beneficial outcomes (AOSIS, MISC.5/Add.2);
- (f) Ensure that the economic activities covered are comparable within and among countries (Switzerland, MISC.5/Add.2);
- (g) Be based on a realistic evaluation of the mitigation potential (Iceland, Japan, Switzerland, MISC.5/Add.2), energy efficiency and carbon intensity at the sector level (Japan, MISC.5/Add.2);
- (h) Be nationally driven so that each country decides on how to implement these approaches and actions (Saudi Arabia, sectoral approaches workshop);

- (i) Be compatible with the global carbon market whenever market instruments are introduced (EC and its member States, MISC.4);
 - (j) Not mix mechanisms under the KP with those under the BAP (AOSIS, MISC.5/Add.2);
 - (k) Prevent carbon leakage (Norway, MISC.1; Canada, MISC.1/Add.2 and MISC.5/Add.2) and address competitiveness concerns (Norway, MISC.1; Canada, MISC.1/Add.2) of energy intensive, internationally competing industries (Switzerland, MISC.5/Add.2);
 - (l) Be a complement to national actions (United States, sectoral approaches workshop) for developed countries (EC and its member States, MISC.4) or to national strategies and mid-term goals (Indonesia, MISC.4/Add.1); be subordinate, and not additional, to economy-wide targets under the KP (Australia, MISC.4/Add.1);
 - (m) Not replace national emission reduction targets (Japan, MISC.4; AOSIS, Bangladesh, sectoral approaches workshop) under the KP/UNFCCC (Norway, MISC.5); not replace legally binding absolute emission reduction targets for all Annex I Parties (G77 and China, sectoral approaches workshop);
 - (n) Not lead to trade sanctions; to the application of single common standards to all countries (Japan, MISC.4); to global standards or benchmarks (China, MISC.5); to emission targets (Indonesia, MISC.4/Add.1; China, MISC.5; G77 and China, sectoral approaches workshop), trade barriers, punitive trade measures (China, sectoral approaches workshop); to standards for developing countries (AOSIS, MISC.5/Add.2; AOSIS, China, sectoral approaches workshop); or to unjustifiable discrimination or disguised restriction of access for non-Annex I Parties to international trade (Indonesia, MISC.4/Add.1);
 - (o) With regard to emissions from international maritime transport:
 - (i) Flag countries, or countries that supply fuel, should not be made responsible for these emissions (Panama, MISC.5);
 - (ii) The implications for SIDS arising from proposed actions to address these emissions should be considered (AOSIS, MISC.5/Add.2).
66. On **the nature** of cooperative sectoral approaches and sector-specific actions, Parties proposed:
- (a) Strictly focusing on enhancing the implementation of Article 4, paragraph 1 (c), of the Convention (China, sectoral approaches workshop); promoting the development, deployment, diffusion and transfer of technology and enhancing sectoral cooperative actions (China, MISC.1 and MISC.5; G77 and China, Saudi Arabia, sectoral approaches workshop) (see also chapter V);
 - (b) Making broad use of sectoral approaches and sector-specific actions:
 - (i) Establishing sector-specific agreements and approaches (Canada, MISC.1/Add.2 and MISC.5/Add.2) or voluntary global sectoral agreements in energy-intensive industries (Turkey, MISC.5);
 - (ii) Recognizing, supporting and/or establishing focused and voluntary technology-oriented agreements that would include, inter alia, cooperation on specific sectors or gases (EC and its member States, MISC.5/Add.1);
 - (iii) Using a sectoral bottom-up approach to set ambitious and feasible national emission reduction targets for developed countries (QELROs) (Japan, MISC.4 (the submission identifies steps to establish comparable national emission

reduction targets) and MISC.5/Add.2); ensuring comparability of efforts by applying methodologies that use indicators such as energy efficiency or GHG intensity (Japan, MISC.5 and MISC.5/Add.2) (see also chapter III E);

- (iv) Establishing absolute sectoral binding caps (through international benchmarks) for developed countries (Switzerland, MISC.5/Add.2);
- (v) Developing sectoral approaches, particularly for major emitting developing countries (AOSIS, MISC.5/Add.2). Using a sectoral bottom-up approach to accelerate mitigation actions in developing countries (Japan, MISC.4 (the submission identifies steps to assess deviation from business as usual in major developing countries)); implementing nationally appropriate mitigation actions in a major part of globally key emitting sectors in developing countries (EC and its member States, MISC.5/Add.1); establishing, for developing countries, intensity targets (Japan, Switzerland, MISC.5/Add.2) that are binding (through international benchmarks) and/or no-lose (negotiated country-by-country) (Switzerland, MISC.5/Add.2);
- (vi) Establishing binding actions based on cooperative sectoral approaches for those Parties without a binding national target (Australia, MISC.4/Add.1);
- (vii) Establishing national mid-term targets in various sectors; developing a “sectoral system of national commitments”, including a set of target parameters of “clean development” subject to international verification (Russian Federation, MISC.5); establishing a “sectoral system of target quantitative indicators” (Uzbekistan, MISC.1).

67. On **selecting sectors**, Parties proposed:

- (a) A comprehensive sectoral coverage (Norway, MISC.5) without bias (Algeria et al, MISC.5/Add.2);
- (b) Giving priority to specific sectors (Maldives, MISC.1; Japan, MISC.4 (the submission identifies three categories of sectors); Iceland, MISC.5/Add.2). Priority areas shall be identified sector by sector and technology by technology (China, MISC.5). The coverage of certain sectors would depend on their contribution to global emissions as well on the capability of countries to take action in those sectors (EC and its member States, MISC.5/Add.1). Actions should be taken in energy and carbon intensive sectors (Japan, MISC.5/Add.2). Sectors mentioned by Parties include:
 - (i) Energy or power generation (Bangladesh, MISC.1; Republic of Korea, sectoral approaches workshop); coal-fired power generation (Japan, MISC.4 and MISC.5; AOSIS, Japan, MISC.5/Add.2; AOSIS, sectoral approaches workshop); energy efficiency (India, sectoral approaches workshop);
 - (ii) Iron and steel (Japan, MISC.4 and MISC.5; AOSIS, Japan, MISC.5/Add.2; Republic of Korea, sectoral approaches workshop);
 - (iii) Cement (Japan, MISC.4, MISC.5 and MISC.5/Add.2; AOSIS, Republic of Korea, sectoral approaches workshop);
 - (iv) Residential/commercial (Japan, MISC.5);
 - (v) Aluminium (Japan, MISC.4 and MISC.5; AOSIS, Japan, MISC.5/Add.2; Republic of Korea, sectoral approaches workshop);

- (vi) Transport (Bangladesh, MISC.1); road transport (Japan, MISC.4, MISC.5 and MISC.5/Add.2; AOSIS, sectoral approaches workshop);
- (vii) Chemical industry (Republic of Korea, sectoral approaches workshop);
- (viii) Pulp and paper (Republic of Korea, sectoral approaches workshop);
- (ix) Forestry (Bangladesh, MISC.1); LULUCF (Japan, MISC.5; Iceland, MISC.5/Add.2);
- (x) Agriculture (Japan, New Zealand, MISC.5);
- (xi) Waste (Japan, MISC.5).

68. On **the scope** of sectoral approaches and sector-specific actions, Parties proposed:

- (a) Adopting approaches and actions that could apply at the national, regional or global levels (EC and its member States, MISC.4);
- (b) Following a domestic focus on economic sectors (as opposed to an “industry” one) (Argentina, MISC.5);
- (c) Establishing an independent legally binding agreement for some sectors (Norway, MISC.1 and MISC.5); using sectoral approaches to target emissions that are not included in national totals (EC and its member States, MISC.4; Australia, MISC.4/Add.1). Addressing, in particular, emissions from international transport (Norway, MISC.1 and MISC.5; EC and its member States, MISC.4; Australia, MISC.4/Add.1), for example, (1) agreeing on an emission target on total GHG emissions from international shipping and inviting IMO to develop a legally binding regime (Norway, MISC.2), (2) including emissions from these sectors in “the global mitigation objective with clear and meaningful targets” (EC and its member States, MISC.5/Add.1), or (3) accelerating progress within ICAO and IMO in cooperation with the processes under the UNFCCC and its KP (AOSIS, MISC.5/Add.2).

69. On **concrete sector-specific actions** Parties proposed:

- (a) Increasing technology deployment and enhancing technology R&D in key sectors; enhancing technology cooperation and technology-oriented agreements on a sectoral basis (China, MISC.1 and MISC.5; EC and its member States, MISC.4; G77 and China, Saudi Arabia, sectoral approaches workshop) (see also chapter V);
- (b) Promoting the transfer of best practices and best available technologies at the sectoral level (Mongolia, MISC.2/Add. 1; Japan, MISC.4; Indonesia, MISC.4/Add.1);
- (c) Developing technology deployment programmes (EC and its member States, MISC.5/Add.1);
- (d) Implementing domestic sectoral policies (EC and its member States, Japan, MISC.4) and sustainable development policies and measures (EC and its members States, MISC.5/Add.1); setting policies at the sectoral level as a way to move beyond project-based mechanisms (Norway, MISC.5/Add.2);
- (e) Addressing emissions from specific sectors through direct regulation-like technical standards (Iceland, Norway, MISC.1; EC and its member States, MISC.5/Add.1), caps (Norway, MISC.1; EC and its member States, MISC.4) or benchmarks (Iceland, MISC.1; EC and its member States, MISC.4);

- (f) Developing strategies, guidance and programmes for sectors (China, sectoral approaches workshop);
 - (g) Establishing norms on packaging, reuse and recycling, and national non-binding energy efficiency programmes, supported by a fund (India, sectoral approaches workshop);
 - (h) Implementing sectoral projects, including pilot ones (Iceland, MISC.1).
70. On instruments and delivery/support mechanisms, Parties proposed:
- (a) Instruments and/or mechanisms based on market approaches (see also chapter III E):
 - (i) Programmatic and/or sectoral CDM based on efficiency standards (Republic of Korea, MISC.2 and sectoral approaches workshop); supplementing the CDM using benchmarking (Australia, MISC.2/Add.1); CDM crediting (Switzerland, MISC.5/Add.2);
 - (ii) Sectoral no-lose mechanisms (EC and its member States, MISC.4) or targets (Australia, MISC.2/Add.1); sectoral crediting (Canada, MISC.1/Add.2; Japan, MISC.5 and MISC.5/Add.2; Republic of Korea, sectoral approaches workshop) based on no-lose targets with voluntary and non-binding targets (EC and its member States, MISC.4, MISC.5/Add.1 and MISC.5/Add.2); no-lose sectoral crediting baselines (South Africa, MISC.5); a baseline and credit system (Switzerland, MISC.5/Add.2);
 - (iii) Emissions trading on a sectoral basis or sectoral trading systems (EC and its member States, MISC.4, MISC.5/Add.1 and MISC.5/Add.2), including ETS (Norway, MISC.5);
 - (iv) Transnational market-based instruments (Iceland, MISC.5/Add.2).
 - (b) Other mechanisms and instruments:
 - (i) Mechanisms for capacity-building and finance (China, sectoral approaches workshop);
 - (ii) Technical and financial support provided by developed countries for energy efficiency targets or action plans in developing countries (Japan, MISC.4);
 - (iii) A sector-specific technology information platform (EC and its member States, MISC.5/Add.1) (see also chapter V);
 - (iv) Technical panels to support an executive body on technology on, inter alia, sectoral, cross-sectoral, and cross-cutting cooperation (India, MISC.5/Add.1) (see also chapter V).
71. On **specific cooperative sectoral approaches and sector-specific actions**, Parties proposed:
- (a) Catalysing and encouraging sectoral cooperation and providing a means of recognizing the benefits of sector-specific actions (United States, MISC.5);
 - (b) Setting up robust governance schemes for monitoring, reporting and verification (EC and its member States, MISC.4) to ensure environmental integrity and compliance (Norway, MISC.5); enhance data collection (Japan, MISC.4);
 - (c) Establishing a group of experts for sectoral technology cooperation with the participation of public- and private-sector experts (Japan MISC.5/Add.2);

- (d) Developing the regulatory framework (codes and norms) for technology agreements in sectors (EC and its member States, sectoral approaches workshop) (see also chapter V);
- (e) Using simple sectoral baselines and politically viable standards on energy generation and efficiency (Republic of Korea, sectoral approaches workshop).

Ideas and proposals presented by observer organizations

72. Observer organizations have also shared concrete ideas and proposals on sectoral approaches and sector-specific actions. These include:

- (a) Scaling up project-based activities by aggregating similar actions in a given sector; standardizing baselines; implement global programmes on single technological interventions or sectors (World Bank, MISC.3);
- (b) Using targets for efficiency indicators; setting goals and formulating plans for improving energy efficiency in each sector and developing legislative and regulatory frameworks (CSEND);
- (c) Developing countries receiving capacity-building, technology and finance should undertake enhanced sectoral actions “above no regrets”. Financial support should be provided through market and non-market mechanisms (CAN);
- (d) Developing sectoral approaches and targets to tackle emissions from international aviation and shipping, and auctioning allowances to raise funding for adaptation and mitigation. Policies should be applied to all flights to and/or from Annex I Parties and to ships on routes to Annex I Parties (CAN);
- (e) Using taxation and mandatory measures (for example, a ban on incandescent bulbs) applicable to sectors such as construction and transport (GLOBE);
- (f) Using memorandums of understanding to promote the participation of energy-intensive sectors and sectors whose emissions cross international boundaries (GLOBE);
- (g) Undertaking an assessment of training needs in sectors where adjustments are going to take place (ITUC);
- (h) Addressing emissions from aviation through a global policy framework encompassing a basket of measures of a technological, operational and market-based nature (ICAO, MISC.6/Add.2).
- (i) Analysing emission reduction potential in different sectors to set medium-term targets, and following a sectoral approach to technical assistance, for example by sharing expert knowledge on best practices for each sector (Keidanren).

E. Various approaches, including opportunities for using markets, to enhance the cost-effectiveness of, and to promote, mitigation actions, bearing in mind different circumstances of developed and developing countries

1. Input by Parties

73. On **the role of market and market-based mechanisms**, Parties noted that:

- (a) The market is important for mobilizing capital and technology in the scale needed to achieve the ultimate objective of the Convention (Argentina, MISC.1; Norway, Russian Federation, MISC.5), providing incentives for mitigation actions, enhancing technology transfer and securing flexibility in achieving a target in each country (Japan, MISC.2; Australia, MISC.2/Add.1; China, MISC.5) and leveraging the private sector

(New Zealand, MISC.5), while the efforts of each country should be primarily based on domestic measures (Japan, MISC.2);

- (b) A properly functioning market will facilitate abatement at a lower cost to the global economy because abatement will occur where and when it is most cost-effective (Australia, MISC.5/Add.1). The market should become a key vehicle for financing mitigation in all Parties (EC and its member States, MISC.5/Add.2), provided that existing and new market mechanisms meet a high standard of environmental integrity (Canada, MISC.5/Add.2);
- (c) The market alone cannot deliver the expected outcomes soon enough to avoid irreversible climate change (Argentina, MISC.1; Norway, Russian Federation, MISC.5);
- (d) The application of market mechanisms is the only fair way of evaluating national mitigation measures, and the price for national carbon unit should be defined by a balance between demand and supply (Ukraine, MISC.2/Add.1).

74. On **the extension, scaling up, review and improvement** of the market-based mechanisms, Parties noted that:

- (a) The expansion and improvement of the flexibility mechanisms are a crucial component of an effective post-2012 framework (Australia, MISC.5/Add.2);
- (b) The challenge is to ensure environmental integrity of the market mechanisms (Norway, MISC.1, Australia, MISC.2/Add.1), strengthen their contribution to sustainable development (Norway, MISC.1; Japan, MISC.2; Australia, MISC.2/Add.1) and technology transfer (Norway, MISC.1), implement them in a cost-effective manner (Japan, MISC.2), enhance the geographical distribution of project activities (Norway, MISC.1; Argentina, MISC.5), reduce administrative costs (Norway, MISC.1; Australia, MISC.5/Add.2), improve efficiency of the approval process (Australia, MISC.2/Add.1) and incorporate conditions to avoid market biases (Argentina, MISC.5);
- (c) Expanding the scope of the flexibility mechanisms to include additional sectors, in particular those relating to LULUCF and REDD, may facilitate a wider geographical distribution of projects (Australia, MISC.5/Add.2).

75. On **the role of carbon markets**, Parties proposed that:

- (a) Expanding the carbon market must be at the heart of a post-2012 agreement. A liquid global carbon market with a broad coverage and deep emission cuts should be developed (EC and its member States, MISC.5/Add.1);
- (b) The global carbon market should be extended to include developing countries as main players (Republic of Korea, MISC.2; EC and its member States, MISC.5/Add.1; Norway, MISC.5/Add.2) and thereby reduce global costs of mitigation by 70 per cent (Republic of Korea, MISC.2);
- (c) There is a need to establish a global price on carbon emissions to create incentives for mitigation and enhance investments in clean technology development and diffusion, and to stimulate countries, businesses and individuals to invest in low-carbon assets (Norway, MISC.1);
- (d) Implementing carbon market related domestic policies that can prepare countries for full integration within the global carbon market should be a priority (EC and its member States, MISC.5/Add.1);

- (e) The potential for a market to generate a demand for permits from developed countries when companies from both developed and developing countries take part in the same ETS should be explored (Norway, MISC.1).

76. On the **extension, scaling up, review and improvement of the market-based mechanisms**, Parties proposed that:

- (a) The operation of the existing flexible mechanisms should continue in the next commitment period. These mechanisms should be extended and complemented by national, regional and international trading systems and mechanisms in compliance with the Convention (Ukraine, MISC.2/Add.1), and should be developed to accord with the mitigation objectives of the post-2012 framework (Australia, MISC.2/Add.1 and MISC.5/Add.2);
- (b) Improvements in the current market mechanisms, CDM, joint implementation (JI) and emissions trading, are indispensable (EC and its member States, Japan, MISC.2, Australia, MISC.2/Add.1). Problems with existing mechanisms should be addressed before considering additional avenues (New Zealand, MISC.5);
- (c) A mechanism should be supportive of ambitious, differentiated mitigation actions; have comprehensive coverage; be environmentally effective and based on sound governance; and respect market integrity (Australia, MISC.5/Add.2);
- (d) There is a need to enable a shift from a project-based approach to a programmatic approach (South Africa, MISC.5);
- (e) Automatic approval for technical aspects of certain well-recognized technologies may enhance effectiveness of mechanisms, but a full waiver of the additionality test should not be supported (Australia, MISC.2/Add.1);
- (f) The governance arrangements for the mechanisms should provide as much certainty and predictability for the market as practicable, balanced with the flexibility to respond to changing circumstances and new technologies (Australia, MISC.5/Add.2);
- (g) Equitable geographical distribution of projects benefiting from existing market mechanisms should be further promoted through assigning a certain quantity of certified emissions reductions (CERs) to each country over a specified time period (Sri Lanka, MISC.1);
- (h) The post-2012 flexibility mechanisms should be available to the widest range of Parties, including those that are Parties to the Convention but not to the KP (Australia, MISC.5/Add.2).

77. On the development of **innovative approaches and mechanisms**, Parties proposed that:

- (a) In addition to improving existing market mechanisms, the possibility of developing new effective mechanisms should be explored (Norway, MISC.1), including sector-based approaches and mechanisms that can contribute to NAMAs in a measurable, reportable and verifiable manner (Japan, Norway, MISC.5) (see also chapter III D);
- (b) A full range of options should be considered, including innovative technology partnerships between Annex I countries and emerging economies (Canada, MISC.1/Add.2) and initiatives realizing a greater share of the potential represented by carbon sinks, as well as market- and sector-based approaches (Norway, MISC.1; Canada, MISC.1/Add.2);

- (c) For the period after 2012, new approaches are needed to scale up sustainable low-carbon investments beyond project-based, offsetting mechanisms, and to explore how to link developing countries' further mitigation action to the carbon market (EC and its member States, MISC.5/Add.1);

78. On **means to facilitate the implementation of nationally appropriate mitigation activities** in developing countries, Parties proposed that:

- (a) An incentive mechanism should be established for major emitting developing countries (based on absolute emissions) to set specific NAMA targets (AOSIS, MISC.5/Add.2). Financing and incentives for pledged mitigation actions by developing countries could come from different categories of funding sources, including public funding, market-linked sources of funding, carbon markets, market finance and other sources (South Africa, MISC.5; AOSIS, MISC.5/Add.2);
- (b) The level of mitigation effort by developing countries is to be commensurate with the level of means of implementation received (South Africa, MISC.5; Indonesia, MISC.5/Add.2). For mechanisms linked to the carbon market, this relationship is mediated by the price of carbon credits. For public funding, it should be proportional to the level of mitigation actions registered (South Africa, MISC.5);
- (c) NAMAs implemented in a measurable, reportable, and verifiable manner should be recognized and rewarded with carbon credits. An approach similar to that of unilateral CDM project activities can be applied, where bank loans are obtained to initiate NAMAs and paid back using revenues from the carbon credits generated by NAMAs (Republic of Korea, MISC.2);
- (d) Carbon credits from NAMAs could play a positive role in generating funds for LDCs and SIDS and for adaptation if a certain share of proceeds were allocated for these purposes as in the case of the CDM transferring proceeds to the Adaptation Fund (AF) (Republic of Korea, MISC.2);
- (e) Voluntary actions such as sustainable development policies and measures (SD-PAMs) should be encouraged and supported (EC and its member States, MISC.2), inter alia, through establishing expedited procedures for funding requests for programmes that implement SD-PAMs (South Africa, MISC.5) and a relevant institutional mechanism (Republic of Korea, MISC.2).

79. On **factors to be taken into account in the design of mechanisms**, Parties proposed that:

- (a) It will be necessary to examine methodological issues to determine how different types of commitments operate in practice and the most appropriate way to ensure that these actions are accurately measured, reported and verified (Canada, MISC.1/Add.2);
- (b) All emissions should be treated equally in order to reach a cost-effective agreement (Norway, MISC.1);
- (c) While the linking of domestic markets is an important step in developing a global response to climate change, decisions on whether to link domestic schemes should remain the national prerogative of Parties with such schemes (Australia, MISC.2/Add.1);
- (d) The continued use of flexible mechanisms to reduce GHG emissions requires close consideration given their potential to displace domestic action by Annex I countries and capture, primarily, only the least expensive mitigation activities in developing countries (Argentina, MISC.5);

- (e) For mechanisms other than emissions trading, only additional emission reductions and reductions that exceed agreed nationally appropriate domestic mitigation actions are credited (Norway, MISC.5/Add.2);
- (f) On the CDM, it is necessary to address such issues as the non-eligibility of carbon capture and storage (CCS) (Norway, MISC.1; Japan, MISC.2; Australia, MISC.2/Add.1) and nuclear power, and the low probability of achieving approval for policy measures such as energy conservation projects (Japan, MISC.2). The inclusion of REDD projects in the market mechanisms (Australia, MISC.2/Add.1) and further opportunities of the LULUCF sector should be explored (Norway, MISC.1; Australia, MISC.2/Add.1). The potential perverse outcomes of CDM project activities should be avoided to ensure environmental effectiveness (Australia, MISC.5/Add.2);
- (g) The status of CDM project activities effective beyond 1 January 2013 in those host Parties that may decide to take mitigation commitments should be determined (Australia, MISC.2/Add.1);
- (h) Increasing banking by eliminating carry-over restrictions on Kyoto units will increase the intertemporal flexibility of the carbon market, which is likely to improve its efficiency (Australia, MISC.5/Add.2);
- (i) The balance of supply and demand in the carbon market can become a tool of speculative actions and may not serve as an indicator of real measures the business community takes to abate climate change (Russian Federation, MISC.5);
- (j) Increased focus on renewable energy and energy efficiency is required. The challenge of securing a sustainable future energy supply by reducing emissions from the production and use of fossil fuels must also be met. Carbon captures and storage is one of the most promising technologies to achieve this (Norway, MISC.5);
- (k) Co-benefits should be identified and considered in an improved CDM framework (Japan, MISC.2);
- (l) Any arrangement for quantified emission limitation objectives established under paragraph 1 (b) (i) of the BAP should not lead to the creation of a mechanism for Annex I Parties that are also Parties to the KP to give up their obligations under the KP and take on new obligations under paragraph 1 (b) (i). The market-based mechanisms under the KP should not be mixed up with any mechanism to be established under the BAP (AOSIS, MISC.5/Add.2).

2. Input by observer organizations

80. Observer organizations proposed that:
- (a) Market forces should be integrated with climate mitigation through a CDM-like approach; and ETSSs should be internationalized via a “bottom-up” approach (IETA);
 - (b) The CDM should play a key strategic role in eradicating poverty and promoting genuinely sustainable development (ITUC);
 - (c) To reflect the principle of common but differentiated responsibilities, the introduction of a discount factor for CERs that increases with the level of development of a country should be explored. The calculation of the discount factor should be based on a simple development index, defined as a combination of per capita income (measured in purchasing power parities) and per capita emissions thresholds (ClimateNet);
 - (d) A future framework should:

- (i) Learn from the experience of the Kyoto mechanisms to strengthen the CDM and aim to link the EU ETS with other planned schemes, with the overall aim of creating a global carbon market. Taxation and mandatory measures may be appropriate for some sectors (GLOBE);
- (ii) Recognize the important role of markets in any cost-effective response to climate change and enhance market and market-based approaches in conjunction with other policy instruments for low-carbon investment (ICC);
- (e) New approaches should enable:
 - (i) Instilling a culture of awareness and commitment to energy efficiency; eliminating subsidies and including externalities in energy prices; requiring policies to eliminate barriers on investment in energy efficiency in the post-2012 framework; requiring Parties to develop national energy efficiency action plans and corresponding governing frameworks under a guidance framework to be initiated at COP 14 (CSEND) (see also chapter III B);
 - (ii) Assessing labour market impacts and adopting transition measures; promoting labour-management initiatives for "greener" workplaces; and using labour policies to identify opportunities for green jobs, greening existing jobs, and phasing out unsustainable jobs (ILO, MISC.6; ITUC);
 - (iii) Stronger inclusion of agriculture and forestry sectors in carbon markets (FAO, MISC.3) and inclusion of the use of biochar as eligible CDM project activity (CATF);
 - (iv) Making the global carbon market accessible to land managers, especially in tropical regions, where sustaining soil organic carbon and soil fertility is most challenging and where CO₂ emissions due to land-use change are highest (UNCCD, MISC.6/Add.1);
 - (v) Keeping all energy options open and stimulating the broader use of existing efficient technologies, as well as supporting the research, development and deployment of low-carbon technologies (ICC);
 - (vi) Stimulating growth and commercial investment in LDC carbon markets by facilitating first-of-a-kind CDM project activities and voluntary market transactions based on new methodologies and innovative approaches with high potential for replication (UNEP, MISC.5/Add.2);
 - (vii) Incorporating social criteria and "broad societal values and norms" in the assessment and approval of CDM projects in developing countries as key criteria (ITUC);
 - (viii) Giving equal access to mitigation in small and medium-sized enterprises and local communities that are excluded from the current mechanisms because of information barriers and high transaction costs (ILO, MISC.5/Add.2).

F. Economic and social consequences of response measures

1. Input by Parties

81. Parties noted that:
- (a) Implementing Article 3.5 of the Convention will ensure that measures taken to combat climate change will not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade (Singapore, MISC.2);
 - (b) Minimizing the impact of response measures under any action or mitigation commitment should be in accordance with Article 4.8 of the Convention (Saudi Arabia, MISC.1);
 - (c) Full consideration must be given to the specific needs and concerns of developing countries as spelt out in Article 4.8 and 4.9 of the Convention. These Articles are a unequivocal recognition of the unique circumstances of developing countries (Singapore, MISC.2).
82. Parties proposed that:
- (a) The Convention can play a role in facilitating analysis and gathering further information on the impacts of response measures and on successful approaches to economic diversification (Australia, MISC.2/Add.1);
 - (b) Measures that can serve both GHG emission reduction efforts and priorities of developing countries, including development, should be identified. The co-benefit approach aims at implementing such measures and thus should constitute an important pillar of development strategies in developing countries (Japan, MISC.2; Australia, MISC.2/Add.1);
 - (c) A world climate change fund (Green Fund) should be established to support: efforts to scale up funding for mitigation actions, for the provision of technical assistance and for the promotion of transfer and diffusion of clean technologies; efforts to adapt to the adverse effects of climate change and the impacts of response measures; and other needs (Mexico, MISC.2) (see also chapter VI);
 - (d) New and additional financial resources shall be provided to address specific needs and concerns of developing country Parties arising from the adverse effects of response measures (Saudi Arabia, MISC.1) (see also chapter VI);
 - (e) There is a need to respond to the adverse impact of response measures through various means, including economic diversification (Saudi Arabia, MISC.1);
 - (f) Win-win technologies to minimize the adverse impact of response measures should be developed and disseminated. Such technologies include CCS, and clean fossil fuel technologies (Saudi Arabia, MISC.1);
 - (g) Circumstances of Parties “with economies that are highly dependent on income generated from the production, processing and export and/or consumption of fossil fuels” (Article 4.10 of the Convention) should be fully taken into account (Russian Federation, Singapore, MISC.5) (see also chapters III A and III B);
 - (h) Consideration of impacts on the poorest and most vulnerable developing country Parties should be prioritized (Australia, MISC.5/Add.2);
 - (i) Because of the difficulty in quantifying the impacts of response measures, and the long-term nature of any impact, national policies and measures (e.g. implementation of low

emission technologies and CCS) are the most effective way to address the impacts of response measures (Australia, MISC.5/Add.2);

- (j) All mitigation actions, policies and measures shall aim at sustainable development and take into account different socio-economic circumstances. They must be comprehensive; cover all relevant sources, sinks and reservoirs of GHGs; and cover all economic sectors without bias (Algeria et al., MISC.5/Add.2);
- (k) A supportive international economic system that leads to sustainable economic growth and development for all developing country Parties should be promoted in order to cope better enable them cope better with climate change and the impacts of response measures. Direct and indirect costs and impacts should be evaluated, and adverse effects on other Parties, especially on developing country Parties and in particular those identified in Article 4, paragraphs 8 and 9, of the Convention, should be minimized (Algeria et al., MISC.5/Add.2);
- (l) Mitigation actions, policies and measures shall not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade (Algeria et al., MISC.5/Add.2);
- (m) All Parties should develop and implement policies and measures to mitigate climate change according to their commitments under the Convention. Efforts to assess potential effects of such response measures should not constrain or hinder progress in addressing climate change (EC and its member States, MISC.5/Add.2);
- (n) In dealing with these consequences, attention should be given to needs and concerns of the LDCs, whose situations are compounded by poverty and development challenges (EC and its member States, MISC.5/Add.2);
- (o) Parties should avoid duplicating efforts. It is important that the discussion on response measures under the AWG-LCA and the AWG-KP is conducted in an efficient way (EC and its member States, MISC. 5/Add.2);
- (p) Developed country Parties should be encouraged to consider the implications of spillover effects (e.g. food miles, biofuels - both positive and negative) of mitigation actions and develop policies to minimize adverse impacts, especially impacts on poorer countries (AOSIS MISC.5/Add.2);
- (q) Recalling the Article 2 of the Convention, policies and measures for mitigation under the Convention should be designed to ensure that food production is not threatened (New Zealand, MISC.5/Add.2);
- (r) Messages should be sent to actors outside the UNFCCC process to encourage positive climate change related initiatives. For example, good outcomes from the WTO Doha Round could help to reduce harmful effects on the climate (New Zealand, MISC.5/Add.2);
- (s) Parties should consider how to avoid negative spillover effects when designing policies and measures to tackle climate change (New Zealand, MISC. 5/Add.2).

2. Input by observer organizations

83. Observer organizations proposed that:

- (a) There is a need for a better analysis of the social and economic effects of mitigation measures in terms of jobs, income, competitiveness and poverty, as well as other social, environmental and economic matters (ITUC);

- (b) The scope of the unintended consequences to be addressed in the UNFCCC process needs to be clearly defined; life-cycle analytical evidence for the scale of the impacts need to be objectively explored and evaluated (CAN);
- (c) There is need to discuss how to sustainably diversify the economies of fossil-fuel-producing countries by sharing experience of economies that have undergone major transformations, and by negotiations on the development and deployment of sustainable technologies, under the relevant agenda items in the UNFCCC processes (CAN);
- (d) There is a need to consider the costs of insurance, technology transfer and other measures 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 (South Centre, MISC.3/Add.1).

G. Ways to strengthen the catalytic role of the Convention in encouraging multilateral bodies, the public and private sectors and civil society, building on synergies among activities and processes, as a means to support mitigation in a coherent and integrated manner

84. Many facets of strengthening the catalytic role of the Convention are addressed in detail elsewhere in this document, in the chapters covering enhanced action on adaptation (chapter VI), technology transfer including support to research/development/deployment of technologies (chapter V), REDD (chapter III C), possible changes in funding arrangements under the Convention (chapter VI), cooperative sectoral approaches (chapter III D), market-based approaches (chapter III E), various issues relating to the “measurable, reportable and verifiable” concept and comparability of effort (chapters III A and III B). This chapter does not repeat the information already assembled elsewhere, but concentrates on those ideas and proposals that cover the strengthening of the framework for the catalytic role of the Convention, synergy with other national and international processes, and engagement of the public and private sectors, and civil society.

1. Input from Parties

85. Parties noted that many stakeholders at the local, regional, national and international levels are involved in the climate change process, and that both public and private sectors are involved (Norway, Pakistan, Uruguay, MISC.1; Australia, Mongolia, MISC.2/Add.1; EC and its member States, MISC.4; Turkey, MISC.5; Australia, MISC.5/Add.2).

86. On strengthening the framework for the catalytic role of the Convention, Parties proposed that:

- (a) The UNFCCC should draw on the approach used in the Pacific Islands Framework for Action on Climate Change 2006–2015 for advancing adaptation under the BAP (Australia, MISC.2/Add.1);
- (b) The UNFCCC should call upon organizations, in particular those of the United Nations system, to facilitate and promote dialogue among their respective stakeholders on the relevant issues and to report on these issues for the benefit of all Parties (EC and its member States, MISC.1);
- (c) Following the example of the Montreal Protocol, the IPCC should be supplemented with an assessment process that is able to rely on the latest scientific studies; the Montreal Protocol does this through its annual assessment process (Mauritius, MISC.1);
- (d) The climate problem should be disaggregated by source, sink and/or sector, as is done under the Montreal Protocol; the multi-year IPCC reports should be supplemented with annual reports from technical committees representing key sources, sinks and sectors, similar to the Montreal Protocol’s Technology Assessment Panel and Technical Options Committees (Micronesia (Federated States of), MISC.1);

- (e) Funding mechanisms to assist developing countries should be informed by and modelled after the Montreal Protocol's multilateral funding mechanism (Micronesia (Federated States of), MISC.1) (see also chapter III B);
- (f) Consideration should be given to using a new type of input to inform and complement negotiating sessions and workshops: 'Pathfinder Projects' would involve a small group of countries working together on a specific project in order to "road-test" ideas and proposals put forward in the AWG-LCA (New Zealand, MISC.1).

87. On **synergy with other national and international processes**, Parties proposed that:

- (a) Sectoral approaches may be important for dealing with emissions that cannot be attributed to any particular economy, and multilateral collaborative action would be the most appropriate means to address emissions from the international aviation and maritime transport sectors (Australia, MISC.4/Add.1);
- (b) The International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO) should be encouraged to participate in the discussions on including emissions from the international aviation and maritime transport sectors in a future climate regime (Norway, MISC.2; Australia, MISC.4/Add.1);
- (c) The International Energy Agency (IEA), should lead a study on the development and diffusion of priority technologies, and develop a "Technology Roadmap for Innovative Energy Technologies Development", which could be an element of the future framework; the relationship between the long-term goal and innovative technology development needs to be discussed in cooperation with the IEA (Japan, MISC.2);
- (d) Close co-operation with the CBD on matters relating to deforestation and sustainable forest management should be encouraged (Norway, MISC.1);
- (e) International shipping should not be included in a post-2012 legal framework under the UNFCCC; however, an IMO framework on GHG emissions should have a policy direction on the output regarding total GHG emissions such a regime can be expected to achieve (Norway, MISC.2);
- (f) The interested multilateral, bilateral and international agencies may be invited to use existing platforms such as the FCPF to coordinate programmes and initiatives for efficiency, consistency and to avoid redundancy (Papua New Guinea, MISC.4/Add.1);
- (g) Input could be requested from other relevant processes under the Convention (e.g. from subsidiary bodies) and outside it (such as requesting the IEA to provide input on mitigation potentials in various sectors) (United States, MISC.1);
- (h) Lessons can be drawn from approaches currently being considered or used by climate investment funds, the Prototype Carbon Fund and the International Finance Corporation (Australia, MISC.5/Add.2);
- (i) The COP should request relevant specialized agencies, including IEA, to review periodically the progress towards the long-term goal of reducing global GHG emissions by at least half by 2050, and to make recommendations to the COP about areas in which international cooperation should be strengthened (Japan, MISC.5/Add.2);
- (j) ICAO and IMO should address emissions from their respective sectors in cooperation with processes under the UNFCCC and its KP; the implications for SIDS arising from proposed actions to address emissions from bunker fuels should be considered (AOSIS, MISC.2/Add.2).

88. Stakeholders in the public and private sectors and civil society, and the business and research communities, should be invited to make submissions, and qualified individuals be invited to make presentations at workshops (Norway, MISC.1; Australia, MISC.1/Add.2).

2. Input from observer organizations

89. Appropriate inputs from other forums than the UNFCCC focusing on climate change could be brought into the discussion under the UNFCCC with the agreement of the COP (CAN).

90. The following should be developed: national needs assessment to measure, report and verify support; technical methodologies for setting baselines; incentive/payment schemes; ways of capturing potential co-benefits and challenges such as permanence and leakage in the agriculture and forestry sectors (FAO/IFAD, MISC.6).

91. Cooperation with other United Nations bodies is needed to achieve an effective solution for aviation emissions. Parties taking part in UNFCCC and ICAO meetings should ensure that emissions from international aviation will be considered under a future climate agreement (ICAO, MISC.3).

92. Environmental, economic and social policies and programmes need to be well informed, coherent, broadly supported and able to engage stakeholders. Dialogue will be essential for dealing with the downside of reducing emissions of GHGs, and workers and entrepreneurs should be assured that a green policies do not mean unemployment for them (ILO, MISC.6, ITUC).

93. To support a post-2012 framework, climate change should be considered in existing international processes such as trade policy negotiations, including the WTO, United Nations technical cooperation agencies and the Montreal Protocol (GLOBE).

94. The BioCarbon Fund is a fund where participants from the public and private sectors focus on LULUCF project-based activities. A Forest Carbon Partnership Facility should assist developing countries in their REDD efforts. Two new climate investment funds (CIF) – the Clean Technology Fund and the Strategic Climate Fund – should provide financing for new development approaches or to scale up activities aimed at a specific climate change challenge or sectoral response through targeted programmes (World Bank, MISC.3);

95. ICAO is developing a Programme of Action on International Aviation and Climate Change with the key elements of: global goals for international aviation; measures to reduce emissions; and, a monitoring and implementation framework. The development schedule of the Programme is aligned with the BAP and supports UNFCCC efforts (ICAO, MISC.6/Add.2).

96. The Marine Environment Protection Committee of the IMO will continue work on a package of measures to increase fuel efficiency of ship design and operation, and consider possible market-based measures to reduce GHG emissions from ships engaged in international trade. The Secretary-General of IMO will submit a position paper to the COP at its fifteenth session on the outcomes of the work of the IMO. IMO's GHG module is available on GISIS (Global Integrated Shipping Information System <<http://gisis.imo.org/Public>>) (IMO, MISC.6/Add.1).

97. The United Nations Human Rights Council and the UN Permanent Forum on Indigenous Peoples should cooperate on matters relating to the impact of climate change on human rights and the rights of indigenous peoples. Also needed is close cooperation with the secretariat of the Aarhus Convention on matters relating to public access to information, participation and access to justice in relation to climate change (FOEI).

IV. Enhanced action on adaptation

98. In addition to the assembly of ideas and proposals presented below, the discussion on this element of the BAP is also reflected in the summaries prepared by the Chair of the AWG-LCA. Please

refer to document FCCC/AWGLCA/2008/6, paragraphs 28–39, document FCCC/AWGLCA/2008/11, paragraphs 27–44, and document FCCC/AWGLCA/2008/13, paragraphs 6–13.

A. International cooperation to support urgent implementation of adaptation actions

Adaptation planning and implementation

1. Input by Parties

99. On the **context of adaptation planning and implementation**, Parties noted that:
- (a) Enhanced adaptation must be guided by, and consistent with, the shared vision, and requires partnerships between different stakeholders within, and between, countries (EC and its member States, MISC.5/Add.1), including the private sector and civil society (Indonesia, MISC.5/Add.2); Synergies with United Nations organizations should be ensured and duplication avoided (EC and its member States, MISC.5/Add.1; Iceland, MISC.5/Add.2);
 - (b) Work on adaptation needs to take full consideration of the current sustainable development objectives of developing countries, while also anticipating future threats to sustainable development. This will require ambitious finance and technology solutions (South Africa, adaptation workshop) (see also chapter VI);
 - (c) There is a need to build capacity and resilience to the anticipated negative impacts of climate change (Canada, MISC.5/Add.2), and develop measures to address those negative impacts for which it is difficult to build resilience (AOSIS, MISC.5/Add.2), and to plan and implement NAPAs (EC and its member States, MISC.5/Add.1; AOSIS, South Africa, adaptation workshop);
 - (d) Adaptation plans should be action-oriented (Brazil, shared vision workshop), as well as planned and implemented at the local level (EC and its member States; MISC.5/Add.2) by local communities (Australia, MISC.5/Add.2);
 - (e) The burden of climate change is additional to the development challenge, and adaptation needs to deal with this (India, MISC.5/Add.1; AOSIS, MISC.5/Add.2; Brazil, shared vision workshop) (also see chapter II);
 - (f) Development activities result in reduced vulnerability to climate change impacts, and lessons learned in the development field should be drawn upon (Australia, MISC.5/Add.2);
 - (g) There is a link between adaptive capacity and human development (Australia, MISC.5/Add.2), and adaptation must be integrated as part of development (Norway, MISC.5/Add.1);
 - (h) Gender-balanced participation (Iceland, MISC.5/Add.2), as well as the involvement of local communities and indigenous peoples, are important aspects of adaptation (Bolivia, MISC.5/Add.2);
 - (i) Adaptation interventions can be categorized into four groups: concrete adaptation projects; adaptation technologies; insurance; and mainstreaming adaptation into ongoing development programmes (India, MISC.5/Add.1);
 - (j) Adaptation measures should include improvements to the physical infrastructure as well as means to deal with the socio-economic impacts of climate change on the population (Singapore, MISC.2);

- (k) Accelerated development may be the best response for enhancing adaptation, as there are many similarities between adaptation interventions and development actions (India, adaptation workshop);
- (l) For adaptation to be effective, it should be integrated into national and subnational development and sectoral planning and policies (United States, MISC.5), and should undergo cost–benefit analysis (Colombia, MISC.5/Add.1);
- (m) Endogenously sourced scientific information for adaptation planning will help to inform national and regional policy guidance (Argentina, MISC.5);

100. On the **nature of adaptation plans**, Parties proposed that:

- (a) A framework/structure for adaptation (AOSIS, MISC.2/Add.1 and MISC.2/Add.2; EC and its member States, MISC.5/Add.1 and MISC.5/Add.2; United States, MISC.5; EC and its member States, adaptation workshop) should be adopted, geared towards the evaluation and implementation of strategies and programme support (EC and its member States, MISC.2; United States, MISC.5) and structured but flexible (AOSIS, MISC.5/Add.2). The formulation of such a framework/structure should take into account/focus on, inter alia:
 - (i) The need to agree on policy parameters to guide action, rather than on mandate-specific operational outcomes better formulated at a national level (Australia, MISC.2/Add.1);
 - (ii) Country-led, flexible, well-governed, and coordinated adaptation that is integrated with development, and taking subsidiarity into account (Norway, MISC.5/Add.1);
 - (iii) The need to know what to expect from climate change; to build resilience to the anticipated negative impacts of climate change; to enhance capacity to respond to disasters, to develop measures to address the impacts for which it is difficult to build resilience; and to address national planning, the streamlining and scaling up of financial and technological support, enhancing knowledge sharing, and institutional arrangements for adaptation (AOSIS, MISC.2/Add.1).
 - (iv) Actions towards facilitating actions by Parties and the public and private sectors, to enable prioritizing, ensure effectiveness, provide leadership, as well as guidance to financial mechanisms of the Convention, adaptation and resilience-building activities (EC and its member States, MISC.2, MISC.5/Add.1 and risk management workshop);
 - (v) A programmatic approach (medium- and long-term) in the form of a national, country-driven adaptation plan (Bangladesh, MISC.1 and adaptation workshop; Venezuela (Bolivarian Republic of), MISC.5/Add.2), supported by strengthening national capacities (Brazil, shared vision workshop);
 - (vi) The need to tailor adaptation actions to different circumstances and local needs (EC and its member States, MISC.5/Add.2), and to address adaptation at the local, national or regional level, complemented by international support (Turkey, MISC.5; EC and its member States, MISC.5/Add.1; Norway, MISC.5/Add.2);
 - (vii) Lessons learned from the Nairobi work programme (Brazil, MISC.5);
 - (viii) Sustainable development at all levels (Australia, Iceland, MISC.5/Add.2);

- (ix) The need for a structured but flexible approach under the Convention (Indonesia, MISC.5/Add.2);
 - (x) The need for an adaptation support mechanism to assist in strategic planning, as there is a need for policy and legal frameworks to enable climate-resistant development (AOSIS, adaptation workshop);
 - (xi) The need to prioritize adaptation action (Argentina, China, MISC.5; Australia, MISC.5/Add.2), which should be guided by the Convention, have clear co-benefits/multi-benefits, address short-term impacts over long-term impacts, link to poverty reduction strategies and be identified in national communications and NAPAs (United States; MISC.5);
 - (xii) Adaptation actions both for urgent and immediate needs and for the long term (AOSIS, MISC.5/Add.2);
 - (xiii) Adaptation priorities should be based on locally targeted information on the scientific and technical aspects of adaptation, including the costs of impacts (Australia, MISC.5/Add.2);
 - (xiv) The need to focus first on the operational interpretation of the listed principles and activities, and then on the support mechanisms to enable the Parties to implement their assessed adaptation strategies, programmes and projects (Bangladesh, MISC.1);
 - (xv) Possible structures incorporating a combination of a sectoral (Russian Federation, MISC.5/Add.2), and functional approach, and organization based on the level and type of actor (United States, MISC.5);
 - (xvi) Two kinds of concrete adaptation interventions: those that respond to the additional burden of climate change, and those that respond to new risks that may arise in the future and be beyond the baseline of climate variability (India, MISC.5/Add.1; AOSIS, MISC.5/Add.2);
 - (xvii) A consolidated work programme which deals with technology and finance for adaptation, capacity-building, prioritization of actions and the means and processes to plan and implement adaptation (African Group, MISC.2/Add.1);
- (b) National adaptation plans should go beyond the current NAPAs, and should be:
- (i) Established as a formal process (AOSIS, MISC.5/Add.2; Gambia, adaptation workshop), prepared in all developing countries (China, MISC.5; AOSIS, adaptation workshop), integrated into all relevant decision-making processes (EC and its member States, shared vision workshop), and provided with support and guidance (United States, adaptation workshop), including support through capacity-building (China, risk workshop);
 - (ii) Living documents to reflect new and more detailed information and to reflect changes in domestic priorities (Australia, MISC.2/Add.1);
 - (iii) Based on environmental and economic vulnerability analysis, an identification of urgent, medium- and long-term action and their costs, and should establish and strengthen institutional capacity for adaptation and environmental education/awareness (Chile, MISC.5/Add.2);

- (iv) Built on the lessons learned from existing mechanisms and processes, like NAPA process in the context of decision 1/CP.10, and prioritized with the assistance of support mechanisms and guidelines (AOSIS, MISC.2/Add.1);
- (v) Nested in a national policy/programmatic and regulatory context (EC and its member States, MISC.5/Add.1; Canada, MISC.5/Add.2), and should take into account insurance-related actions and the application of measurement, reporting and verifying (Bangladesh, risk workshop);
- (c) Adaptation should be country-driven (United States, MISC.5), and tailored to the particular circumstances of the countries or regions affected (Turkey, MISC.5; Australia, MISC.5/Add.2), and in line with country/region-specific sectoral and regional planning (LDCs, MISC.1; Turkey, MISC.5);
- (d) Plans should result in enabling countries to access, enhance the effectiveness of, and prioritize the use of, resources for adaptation projects and programmes (Gambia, adaptation workshop);
- (e) Existing mechanisms, such as appropriately tailored national communications (Australia, EC and its member States, MISC.5/Add.1), or an enhanced NAPA-like process integrated within national development plans (Australia, MISC.5/Add.2), should be used to enable vulnerable countries to identify and communicate adaptation priorities (Australia, EC and its member States, MISC.5/Add.1);
- (f) Ways to strengthen international cooperation in implementation of adaptation actions, and to prioritize actions should be identified (Uzbekistan, MISC.1; Australia, MISC.2/Add.1; Turkey, MISC.5/Add.1);
- (g) The assessment of the implementation of plans and the provision of support should be measurable, reportable and verifiable, with clear targets and time lines (LDCs, Gambia, adaptation workshop); and an effective and enhanced global effort should be made to monitor progress on adaptation with the aim of incentivizing and advancing adaptation at the local, national and regional level (Bangladesh, MISC.1; EC and its member States, MISC.5/Add.1).

101. On the **integration of adaptation into national policy**, Parties proposed that:

- (a) Adaptation should be consistent with, and/or integrated into:
 - (i) National and sectoral plans, strategies and priorities (China, Turkey, MISC.5; EC and its member States, MISC.5/Add.1; Australia, MISC.5/Add.2) with priorities identified at a national level (Australia, MISC.5/Add.2);
 - (ii) National budget planning and processes (EC and its member States, MISC.5/Add.1; Australia, MISC.5/Add.2);
 - (iii) Development planning and projects at national and international levels (EC and its member States, MISC.5/Add.1; United States, MISC.5; as well as at the regional level (Colombia, MISC.5/Add.1; Russian Federation, Turkey, MISC.5/Add.2);
 - (iv) Development planning within a sustainable development framework (Bangladesh, MISC.1);
 - (v) The identification and implementation of measures to address the exacerbated risks of climate change in national policies (AOSIS, MISC.5/Add.2);

- (vi) Broader national planning, decision-making and budget processes, particularly with regard to development priorities (Australia, MISC.5/Add.2);
- (b) The gap between the present project-based approach to adaptation and an adaptation process in the context of national and sectoral planning should be bridged, and a broader, longer-term approach should be adopted (EC and its member States, MISC.5/Add.1);
- (c) The gap between the present project-based approach to adaptation and an adaptation process that contributes to and results in resilience-building in the context of national and sectoral planning, should be bridged. NAPAs that have been prepared or are under preparation should be supported, however a broader and more long-term approach is needed (EC and its member States, MISC.5/Add.1);
- (d) Action should go beyond the integration of adaptation into the development process, and include stand-alone adaptation projects (African Group, MISC.2/Add.1);
- (e) Guidance documents should be developed on:
 - (i) The integration of climate risks (AOSIS, MISC.5/Add.2) and considerations into development planning for various sectoral climate-resilient strategies within a sustainable development framework (Bangladesh, MISC.1; Iceland, MISC.5/Add.2);
 - (ii) Climate-resilient development, which should also be promoted (Indonesia, MISC.1; LDCs, adaptation workshop);
- (f) Economic information and evaluation capacity, which are key to mainstreaming adaptation into sustainable development, should be a component of an adaptation action plan (Argentina, MISC.5).

102. On **vulnerability and adaptation assessments** to support adaptation planning and implementation, Parties proposed the following:

- (a) Consideration of the following elements in order to ensure the effectiveness of the assessment process:
 - (i) Information, diagnostic and policy tools (Argentina, MISC.5);
 - (ii) Increasing capacity to translate data into information for users and, thus, into action (Brazil, MISC.5);
 - (iii) Vulnerability mapping that is country driven and based on national circumstances (African Group, MISC.2/Add.1; Brazil, MISC.5);
 - (iv) The enhancement and use of climate projections and scenarios (African Group, MISC.2/Add.1; India, adaptation workshop) and scientific assessments (Australia, MISC.2/Add.1; Japan, adaptation workshop);
 - (v) An elaboration of scenarios for future vulnerability (Chile, MISC.5/Add.2)
 - (vi) Improve access to analytical tools and SIDS-specific scenario output information packages that are appropriately downscaled and incorporate uncertainty ranges; and address information ownership concerns in order to enable scenario generation and current and future impact assessments (AOSIS, MISC.2/Add.1 and MISC.5/Add.2);
 - (vii) Improved regional and global modeling capabilities (India, adaptation workshop);

- (viii) International cooperation in assessments (Uzbekistan, MISC.1);
 - (b) Methods or broad criteria for determining Parties' vulnerability to climate change and prioritizing multilateral support, based on physical impacts and capacity to adapt (Australia, MISC.5/Add.2), particularly for LDCs, SIDS and African drought- and flood-prone countries, for preferential treatment in accessing funds in the future climate regime (LDCs, MISC.1) (see also chapter VI);
 - (c) Well-defined indicators to determine adaptation priorities, to be addressed in conjunction with the AF Board (Argentina, MISC.1);
 - (d) Indicators and benchmarks that guide resource and research allocations (Argentina, MISC.5);
 - (e) Supporting endogenous capacity to apply the tools to facilitate vulnerability assessments for use in national planning; participatory assessments; strengthening climate change data collection and analysis at the local level; supporting the implementation of regional plans of the GCOS, improving access to data relevant to the mapping of impacts; and enhancing the transfer and deployment of soft adaptation technologies (AOSIS, MISC.2/Add.1 and MISC.5/Add.2);
 - (f) Economic evaluation of the impacts of climate change as well as the potential development paths required to secure adaptation, and nationally appropriate policies to sustain growth in the most climate-friendly manner (Argentina, MISC.5);
 - (g) Assessment of the costs of adaptation (China, MISC.5), related to vulnerability, the means of implementation of adaptation and cost-benefit analyses of adaptation projects and programmes, taking into account ecosystem-based approach strategies (Colombia, MISC.5/Add.1), particularly in Africa (African Group, MISC.2/Add.1).
103. **On incentivizing adaptation, and creating enabling environments**, Parties proposed:
- (a) With regard to incentivizing adaptation:
 - (i) Means to incentivize the implementation of adaptation actions (LDCs, adaptation workshop), and to encourage donors to provide incentives for developing country governments to take adaptation action (Mauritius, MISC.1);
 - (ii) Positive incentives for developing country Parties for adaptation, and the creation of an appropriate mechanism (LDCs, MISC.1);
 - (iii) Public-private partnerships and national regulation for companies to incentivize anticipatory adaptation (Bangladesh, risk workshop);
 - (iv) The successful demonstration of locally appropriate adaptation technologies with positive on-the-ground outcomes for local communities as an incentive (AOSIS, MISC.5/Add.2);
 - (v) Enhancing consistency and synergy between relevant processes at a national level to reduce the operational risk to the private sector and other organizations that engage in adaptation (EC and its member States, MISC.2);
 - (b) The creation of enabling environments (AOSIS, MISC.5/Add.2; Bangladesh, shared vision workshop), and the responsibility of developing countries in doing so (EC and its member States, MISC.5/Add.1), including through regulatory policies, legislative changes, national capacity-building (AOSIS, MISC.5/Add.2; Turkey, MISC.5/Add.1)

and environmental impact assessments, and leading to implementation (AOSIS, MISC.2/Add.1);

- (c) That governments should play leading roles in creating enabling environments for adaptation, including through identifying vulnerabilities to climate change; improving the environment for doing business; creating legal and regulatory conditions that facilitate adaptation; reducing perverse incentives that encourage maladaptation; enhancing the necessary information and knowledge base; and educating stakeholders (United States, MISC.5/Add.2);
- (d) That the creation of enabling environments be part of the national adaptation planning (Argentina, MISC.5).

Streamlining and scaling up financial and technological support for adaptation

104. On the **context of streamlining and scaling up financial support** (see chapter VI and the proposals below on adaptation-specific financing) **and technological support** (see chapter V and the proposals below on adaptation-specific technology) for adaptation, Parties noted that:

- (a) Technological support must recognize that adaptation technology is sector-specific (African Group, MISC.2/Add.1; Colombia, MISC.5/Add.1) and must be aimed at effective adaptation action (EC and its member States, MISC.5/Add.1);
- (b) Increased financing to support adaptation is dependent on local circumstances, and support needs to be prioritized according to broad criteria (Australia, MISC.5/Add.2);
- (c) Financial support can be streamlined through a new financial mechanism for adaptation with institutional arrangements that allow for direct and easy access (India, MISC.5/Add.1);
- (d) Collaborative development and sharing of technologies, including endogenous technologies, for adaptation is an essential element of adaptation (Philippines, MISC.1);
- (e) International support to manage the effects of climate change will be significantly more effective if it is in line with international development assistance architecture (EC and its member States, MISC.2);
- (f) Support is needed for integrating adaptation into risk reduction strategies and sectoral plans, capacity-building, information exchange and public awareness (Turkey, MISC.5/Add.1);
- (g) Existing institutional arrangements should be used to the extent possible (United States, MISC.5/Add.2);
- (h) Building upon the research, and through developing adaptation-related vulnerability indicators, it is important to examine measures to enable technology transfer and financial assistance in a measurable, reportable and verifiable manner (Japan, MISC.2) (see also chapter VI).

105. Parties proposed that **financial support** be directed at:

- (a) Adaptation to the additional burden of climate change, its additional costs (India, MISC.5/Add.1) and its adverse effects (Mexico, MISC.2; EC and its member States, MISC.5/Add.1);
- (b) The development and urgent implementation of adaptation (LDCs, MISC.1; Pakistan, MISC.1/Add.1; AOSIS, MISC.5/Add.2; Argentina, China, United States, MISC.5),

- NAPAs (AOSIS, MISC.2/Add.1; EC and its member States, MISC.5/Add.1; China, adaptation workshop), and those activities that need to take place over a longer time (AOSIS, MISC.2/Add.1);
- (c) Adaptation programmes (LDCs, MISC.1) that are country-driven (AOSIS, MISC.5/Add.2) beyond a project-by-project approach (India, MISC.5/Add.1), and national adaptation programmes (African Group, MISC.2/Add.1; China, MISC.5; EC and its member States, MISC.5/Add.1; Bangladesh, adaptation workshop), and the integration of adaptation into sectoral planning (China, MISC.5; EC and its member States, MISC.5/Add.1);
 - (d) Concrete adaptation projects and stand-alone projects (AOSIS, MISC.5/Add.2; LDCs, MISC.1; African Group, MISC.2/Add.1), and technical assistance for the preparation of projects (Mexico, MISC.2);
 - (e) A wide variety of adaptation interventions (India, MISC.5/Add.1);
 - (f) Strengthening the resilience of national and sectoral plans to climate change (EC and its member States, MISC.5/Add.1);
 - (g) Risk-based planning and programmatic processes at the national and local level (Philippines, risk workshop), risk management and risk reduction strategies, and the ability to deal with extreme events and disasters (China, MISC.2 and risk workshop), including insurance mechanisms to ensure institutional preparedness (EC and its member States, MISC.5/Add.1);
 - (h) A reinsurance fund to deal with the catastrophic losses arising from climate change hazards (India, MISC.5/Add.1);
 - (i) A multi-window mechanism to address loss and damage from climate change impacts (AOSIS, MISC.5/Add.2);
 - (j) Access to, and the development of, adaptation-specific technologies (China, MISC.5; India, MISC.5/Add.1), and technology for stand-alone adaptation projects (African Group, MISC.2/Add.1);
 - (k) The highest priority actions, building on expertise and experience of relevant institutions, and adaptation linked to development (United States, MISC.5);
 - (l) Mobilizing and improving cooperation with relevant organizations (EC and its member States, MISC.5/Add.1);
 - (m) National capacity assessments (LDCs, MISC.1); vulnerability and adaptation assessment, including assessment of adaptation cost (China, MISC.5);
 - (n) Training and capacity-building (LDCs, MISC.1; Mongolia, MISC.2/Add.1; Colombia, MISC.5/Add.1; China, adaptation workshop);
 - (o) Research (LDCs, MISC.1), information exchange, education and public awareness (China, MISC.5; EC and its member States, MISC.5/Add.1);
 - (p) Building climate resilience (China, MISC.5) and achieving sustainable development through economic diversification (Turkey, MISC.5/Add.1);
 - (q) The management of financial risk from increasingly frequent and severe extreme weather events, and risk reduction initiatives (AOSIS, adaptation workshop; China, MISC.5).

106. Parties proposed that **technological support** be directed at:

- (a) Addressing climate vulnerability; cost-effectiveness; geographic, social and cultural appropriateness; sustainability considerations; human rights relevance (Argentina, MISC.5); and capacity-building (African Group, MISC.2/Add.1);
- (b) The establishment of risk monitoring networks and other technological resources, including early warning systems (Argentina, MISC.5; AOSIS, MISC.5/Add.2), systematic observation, modelling, forecasting and access to climate information (EC and its member States, MISC.5/Add.1; AOSIS, MISC.5/Add.2);
- (c) Performing and updating vulnerability and adaptation assessments (AOSIS, MISC.5/Add.2);
- (d) Utilizing the full spectrum of technologies, from traditional knowledge to frontier science, in all sectors (India, adaptation workshop);
- (e) Climate-proofing projects to enhance resilience and minimize vulnerability (Trinidad and Tobago, MISC.5/Add.2);
- (f) Short-term or immediate strategies to support the development of experience and technologies, while promoting the protection of public health, local communities and competitiveness (Argentina, MISC.1).

Enhancing knowledge sharing

107. On the **context of enhancing knowledge sharing**, Parties noted that:

- (a) Working in partnership through knowledge sharing and the exchange of practical experience would lead to more effective adaptation (United States, MISC.5; AOSIS, MISC.5/Add.2), and the support of knowledge-based institutional networks can help to create enabling environments for adaptation (Bangladesh, shared vision workshop) (see also chapter II);
- (b) The identification and/or development of appropriate regional centres for undertaking R&D, and of appropriate modalities for North–South and South–South cooperation for diffusion of the technologies, is important (Uruguay, MISC.1).

108. On the **ways to enhance knowledge sharing**, Parties proposed that:

- (a) The following are needed to enhance knowledge sharing:
 - (i) Strengthening of information networks (AOSIS, MISC.5/Add.2; China, MISC.5; AOSIS, shared vision workshop) (see chapter II) and partnerships at the bilateral and multilateral level (Iceland, MISC.6/Add.1);
 - (ii) Support for public information and awareness-raising (AOSIS, MISC.2/Add.1; China, MISC.5; Colombia, MISC.5/Add.1) and utilizing existing expertise and lessons learned (United States, MISC.5; Norway, MISC.5/Add.1; AOSIS, Iceland, MISC.5/Add.2);
 - (iii) Establishment and maintenance of databases and repositories of adaptation-related information (AOSIS, MISC.5/Add.2; China, MISC.5);
 - (iv) Preparation and dissemination of compilations and syntheses of best practices for adaptation (AOSIS, MISC.5/Add.2; China, MISC.5);
 - (v) Availability of professional development opportunities through scholarships, fellowships and other forms of new and existing access to training (AOSIS, MISC.5/Add.2; Colombia, MISC.5/Add.1; Iceland, MISC.5/Add.2);

- (vi) Study visits and professional exchanges between technical personnel from different countries and regions (AOSIS, MISC.2/Add.1);
- (vii) Appropriate, targeted information, provided by actors at all levels, for local communities to prioritize adaptation (Australia, MISC.5/Add.2);
- (viii) The publication of peer reviewed documents and journals and the sharing of scientific information (AOSIS, MISC.2/Add.1 and MISC.5/Add.2);
- (b) The assessment and exchange of lessons learned should be facilitated, and the knowledge base for adaptation should be built on (African Group, MISC.2/Add.1), including lessons learned in local communities (Colombia, MISC.5/Add.1);
- (c) Expertise which exists within many multilateral organizations, national governments, NGOs, development agencies and the private sector, should be drawn upon to inform discussions (Canada, MISC.1/Add.2), and those organizations should be mobilized (EC and its member States, MISC.5/Add.1).

109. Parties also made proposals on **networks and regional centres**:

- (a) Regional centres should be established/enhanced as a means to deliver information and training on a range of issues (EC and its member States, MISC.2; AOSIS, MISC.2/Add.1; Brazil, MISC.5; Colombia, MISC.5/Add.1; AOSIS, Indonesia, Russian Federation, MISC.5/Add.2; China, AOSIS, adaptation workshop);
- (b) National and regional centres could assist Parties to build endogenous capacity for, inter alia, the development of analytical tools to enable scenario generation and downscaling for current and future impact assessments; the research, development and transfer of adaptation technologies; awareness raising; support of pilot projects and capacity-building; the publication of studies on adaptation; and the strengthening of early warning systems (Brazil, MISC.5; China, MISC.5);
- (c) In delivering information and training through networks and regional centres, the following were proposed:
 - (i) Learning institutions to assist vulnerable communities to identify long-term needs (Brazil, MISC.5; AOSIS, MISC.5/Add.2 and adaptation workshop);
 - (ii) International, regional and national adaptation research and technical support centres (LDCs, MISC.1; LDCs, adaptation workshop; AOSIS, MISC.5/Add.2; Bangladesh, China, FCCC/AWGLCA/2008/11);
 - (iii) Capacity development to enhance risk management and reduction, data and information management, and vulnerability assessments (Indonesia, MISC.5/Add.2);
 - (iv) Exchange of experiences with endogenous technologies (AOSIS, MISC.5/Add.2);
- (d) An African regional adaptation implementation initiative, based on Africa's adaptation priorities, should be included in a consolidated work programme on adaptation to provide a coherent and scaled package of financial, technical capacity-building and institutional support for adaptation in Africa (African Group, MISC.2/Add.1) (see also chapter VI);
- (e) Regional adaptation centres should be established in Latin America to promote information exchange on short-, medium-, and long-term climate change challenges and

risks in the region, capacity-building, research, and development and transfer of technologies (Colombia, MISC.5/Add.1) (see also chapter V);

- (f) The additional value that regional bodies could provide to international adaptation efforts should be explored, taking into account the specific expertise and scope of existing bodies, in order to identify if, and where, gaps can be addressed (Australia, MISC.2/Add.1);
- (g) Existing regional centres should be strengthened and mobilized, and an arena should be provided for them to collaborate and share knowledge (EC and its member States, MISC.5/Add.1);
- (h) Regional centres, relying as far as possible on existing regional architecture, should play an important role in addressing remaining gaps in coordination (Australia, MISC.5/Add.2), particularly with regard to disaster risk reduction, climate resilience and climate-resilient development (United States, MISC.5).

Institutional arrangements

110. On the **context of institutional arrangements**, Parties noted that:

- (a) The variety of actors and processes engaged in actions that are relevant to adapting to climate change will require coordinated efforts on many fronts (EC and its member States, MISC.2);
- (b) Efforts on adaptation need to be coordinated with efforts by other multilateral bodies and stakeholders (Iceland, MISC.1);
- (c) It would not be possible to address adaptation solely under a multilateral setting. Many stakeholders at the local, regional, national and international levels need to actively participate (Australia, MISC.2/Add.1);
- (d) The United Nations Secretary-General has a role in ensuring that smooth lines of cooperation exist between United Nations agencies working on adaptation activities, in order to avoid duplication and competition (Australia, MISC.2/Add.1).

111. On the **nature of institutional arrangements**, Parties proposed that:

- (a) Mechanisms are needed to coordinate adaptation, such as a United Nations coordination mechanism for linking institutions doing adaptation work, particularly for country driven adaptation (AOSIS, MISC.5/Add.2 and adaptation workshop);
- (b) The institutional set-up for adaptation should be reorganized and focused (South Africa, adaptation workshop), under the umbrella of the UNFCCC (AOSIS, MISC.5/Add.2);
- (c) Institutional frameworks/arrangements for adaptation should include an institutionalized structure and process to identify and fund the most urgent and immediate needs and priorities of SIDS and LDCs, so that efforts are coordinated at all levels and a mechanism for delivering resources and technical support to address these priority needs. This will require mutually reinforcing institutional structures at the national, regional and international levels national-level adaptation mechanisms; and a multi-window mechanism to address loss and damage from climate change impacts (AOSIS, MISC.2/Add.1, MISC.5/Add.2) (see also chapter VI); links with other international, regional and national bodies and stakeholders involved in adaptation-related activities should be facilitated (African Group, MISC.2/Add.1), and the United Nations system-wide coherence mechanism should be a key means of enhancing coordination (Australia, MISC.5/Add.2);

- (d) The UNFCCC could draw on the approach used in the Pacific Islands Framework for Action on Climate Change 2006–2015 for advancing adaptation (Australia, MISC.2/Add.1);
- (e) A portfolio of possible areas of action and international cooperation on adaptation should be identified (United States, adaptation workshop);
- (f) A protocol on adaptation within the UNFCCC should be part of the post-Kyoto regime, and an international centre for adaptation should be established (Bangladesh, MISC.1);
- (g) Consideration of international cooperation should build upon, and be in addition to, the work already being undertaken under the Convention (Philippines, MISC.1);
- (h) Parties to the UNFCCC could outline the roles and responsibilities of different actors and agree on the principles to guide adaptation action, where possible identifying priority areas through information provided by national governments, and regional and multilateral bodies (Australia, MISC.2/Add.1);
- (i) There is a need to establish a climate change adaptation committee under the Convention (AOSIS, MISC.5/Add.2, China, MISC.5 and adaptation workshop), to enhance adaptation and allow the international community to act together as early as possible to adapt to climate change, focusing on providing help to developing countries for capacity-building and practical actions (China, adaptation workshop, MISC.5);
- (j) National climate change committees for adaptation, similar to the “ozone units” created by the Multilateral Fund of the Montreal Protocol, would enhance coherence in national policies for adaptation (Brazil, MISC.5).

2. Input by observer organizations

112. On adaptation planning and implementation, organizations proposed that:
- (a) Efforts to reduce vulnerability and build resilience to extreme events should be prioritized in the short term. Actions should build on, and scale up, existing widely available good practices (ISDR, MISC.6);
 - (b) There is a need to implement or strengthen legislation, ensure wide engagement of stakeholders and decentralized planning, and conduct assessments of changing hazards and vulnerabilities, risks and capacities to provide national and community baselines and priorities for intervention (ISDR, MISC.6);
 - (c) Frameworks and governance structures should be created to attract resources (ICC);
 - (d) Adaptation should be implemented within national development (IASC/ISDR, MISC.6/Add.1), and national needs for climate observation should be a priority in national adaptation planning. Countries should put in place cross-discipline and cross-agency coordination mechanisms at the national and regional levels (GCOS, MISC.6);
 - (e) To strengthen national planning for adaptation, legislation to reduce risks from natural hazards should be implemented or strengthened. This should involve engagement of stakeholders and implementation of number of relevant actions, such as risk assessments; strengthening of early-warning systems; and integrating disaster-reducing activities into sector-specific adaptation plans (IASC/ISDR, MISC.6/Add.1);
 - (f) Regional migration observations, detailed regional and country level assessments of environmental states and migratory flows, and pilot projects of adaptation measures should be envisaged (UNU, MISC.3);

- (g) A thorough investigation of the role of the land (UNCCD, MISC.6/Add.2) and wetland management and restoration in climate adaptation is needed (Wetlands Int.), as well as consideration of the impact of climate change on agriculture (IFAP);
- (h) The following should be taken into account: gender analysis and sex-disaggregated data (WEDO/GGCA); biodiversity-related impacts of climate change, and the knowledge and assessments thereof (CBD, MISC.6/Add.2); migration as a result of climate change (IASC, MISC.6/Add.2); and the link between poverty and vulnerability (ILO, MISC.6/Add.2);
- (i) A rights-based approach (Germanwatch/BftW/CARE), an ecosystem-based approach (IUCN), and social dialogue (ILO, MISC.6) should be incorporated into work under the UNFCCC;
- (j) Intelligent and precautionary planning; adaptation should be prioritized towards the most vulnerable, including women (CAN).

113. On streamlining and scaling up financial support (see chapter VI and the proposals below that deal with adaptation-specific financing), and technological support (see chapter V and the proposals below that deal with adaptation specific technology), organizations proposed that:

- (a) Financial support should be directed at a number of activities, including: strengthening, and meeting the costs of, adaptation, risk assessment and management (Keidanren); minimizing the adverse effects of climate change (CAN); R&D of new clean and renewable energy technologies for adaptation, climate science research, and disaster response (ITUC); prevention and insurance components of a risk management framework (MCII, risk workshop); the implementation of GCOS regional action plans and the Climate for Development in Africa Programme (GCOS, MISC.6); wetlands conservation and restoration (Wetlands Int.); and adaptation initiatives and national policies and programmes that prioritize women and other vulnerable groups (WEDO/GGCA);
- (b) The priorities of the Hyogo Framework for Action should be used as the basis for funding (IASC/ISDR, MISC.6/Add.1);
- (c) With regard to technological support, public–public partnerships for technology transfer in the utilities sector should be encouraged and financially supported. Public procurement contracts should include specifications for labour and environmental sustainability standards (ITUC).

114. On enhancing knowledge sharing, organizations noted that:

- (a) Raising public awareness about climate-related migration is essential (UNU, MISC.3), and increased data exchange and tailored climate services based on improved climate observation are important (GCOS, MISC.6);
- (b) Parties should be encouraged to ensure access to relevant climate information, to propose a regional mitigation and adaptation framework and identify win–win options for the socio-economic sectors, to recommend policy and financial innovations to enable smooth implementation of the regional frameworks, and to explore appropriate options for strengthening information exchange on climate change impacts (WMO, MISC.6);
- (c) A mechanism needs to be developed for sharing experiences on how climate information and model predictions can be incorporated in planning processes (WMO, MISC.6);

- (d) Methodologies for translating climate information into social and economic benefits need to be improved and used more widely in the development of effective adaptation and mitigation strategies (WMO, MISC.6);
- (e) An international climate prediction and information service, led by WMO with partners in other United Nations organizations, regions and nations, is needed (WMO, MISC.6), and existing experienced centres and organizations should be engaged as front-line actors and institutional partners in adaptation planning and implementation (ISDR, MISC.6);
- (f) Regional sectoral centres concerned with adaptation need to be strengthened and linked into a global adaptation network (ISDR, MISC.6; IASC/ISDR, MISC.6/Add.1), inter-ministerial committees at national government level should be established (Tearfund) and technical institutional capacities should be strengthened (IASC/ISDR, MISC.6/Add.1).

115. On institutional arrangements, organizations proposed that:

- (a) Efforts by the United Nations system to coordinate action to support Parties in respect to climate change, and specifically to provide support for adaptation practices, should be continued (ISDR, MISC.6), and adaptation efforts should take advantage of the multi-stakeholder ISDR system and the multi-partner IASC system (IASC/ISDR, MISC.6/Add.1);
- (b) Institutions in countries that are sources and receivers of climate-related migrants should work together (UNU, MISC.3);
- (c) Developed countries capable of funding improvements in observations should participate in the annual meeting of the CGOS Cooperation Board, as this may assist in delivering the improvements needed in observing systems developing countries (GCOS, MISC.6);
- (d) Mechanisms for integrated delivery of development assistance and assistance to address climate change must be promoted at the national level. Existing coordinating mechanisms may be further enhanced to support such an integrated delivery (UNDP, MISC.6).

B. Risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance

1. Input by Parties

116. On **context**, Parties noted that adaptation interventions should reduce vulnerability and/or enhance adaptive capacity to climate risk (India, adaptation workshop), including through risk reduction strategies (Argentina, MISC.5).

117. Parties proposed that:

- (a) Analyses of specific mechanisms that promote resilience, including best practices with respect to planning and risk sharing, should be considered. The outcomes of such analyses will need to cover current barriers to adaptation, including limitations in awareness of climate risks and the local benefits of adaptation, mechanisms for information-sharing, and institutional capacity, and will need to assess how best to address them (Canada, MISC.1/Add.2);
- (b) A multi-window mechanism under the Convention should be established, supported by a technical facility and a financial vehicle/facility, to address loss and damage from climate change impacts. It should include insurance, rehabilitation/compensatory and risk management components (AOSIS, MISC.5/Add.2 and risk workshop) (see also chapter VI);

- (c) Adaptation should be based on the effective use of early warning systems, climate projection scenarios, vulnerability maps and risk assessments, to identify priorities for short- and long-term adaptation (African Group, MISC.2/Add.1; Colombia, MISC.5, Add.1), and atmospheric simulations in Andean countries should be enhanced through climate change scenarios (Colombia, MISC.5/Add.1);
- (d) Risk management approaches must include capacity-building to ensure institutional preparedness, enabling environments, broad stakeholder participation, insurance, and access to information and resources (EC and its member States, MISC.2 and risk workshop);
- (e) A global workshop on microinsurance should be held, and index-based community insurance and microinsurance pilots undertaken (Bangladesh, risk workshop);
- (f) There is a need to develop methodologies and an outline for risk reduction strategies (LDCs, MISC.1);
- (g) There is a need for: an international insurance mechanism; early warning systems; risk assessments to identify priorities for short- and long- term adaptation; development of methodologies; an outline for risk reduction strategies; capacity-building; a regional information system; and collaborative mechanisms to facilitate activities driven by identified needs and requirements (Turkey, MISC.5/Add.1);
- (h) Risk management should involve risk assessments/quantification, the drawing up of options and mainstreaming risk management into land-use planning and implementation (Philippines, risk workshop);
- (i) Adaptation, incorporating risk management strategies, should be integrated into sectoral, sub-national and national development planning and programmes supporting in order to achieve economic growth that is resilient to current climate variability and future climate change. Existing institutions and networks with expertise in disaster risk reduction, climate resilience and climate-resilient development should be used to maximize efficiency and effective delivery of service (United States, MISC.5/Add.2);
- (j) Climate risk information should be enhanced, through:
 - (i) Establishing a regional information system on short-, medium- and long-term climate change risks in Africa (African Group, MISC.2/Add.1);
 - (ii) Supporting the scientific community to become more actively engaged in order to provide easily accessible climate risk information. Such information should put current and future climate in the perspective of national development priorities (Mauritius, MISC.1);
- (k) Strategies for risk management and for adaptation to climate change need be coordinated in order to enhance adaptation (Uruguay, MISC.1);
- (l) In addressing risk sharing and transfer, the following should be taken into consideration:
 - (i) Efficiency of risk diversification and risk sharing mechanisms, including insurance, must be considered (Japan, MISC.2; Australia, MISC.5/Add.2). Efforts such as those by the Japan Bank for International Cooperation research group need to be advanced (Japan, MISC.2) (see also chapter VI);
 - (ii) There is value in exploring ways in which the UNFCCC might catalyse the development of private insurance mechanisms, micro-insurance and/or indexed insurance mechanisms, and, particularly, risk reduction/risk prevention activities.

However, there is no need for an additional fund or intergovernmental insurance mechanisms (United States, MISC.5) (see also chapter VI);

- (iii) Insurance schemes should be established, and engagement of the private sector in the development and implementation of insurance schemes should be catalysed (EC and its member States, MISC.5/Add.1).

2. Input by observer organizations

118. Organizations proposed that:

- (a) Risks and capacities should be assessed (ISDR, MISC.6);
- (b) Governments should introduce regulatory practices and adopt flexible policies for climate risk management and adaptation (WMO, MISC 6);
- (c) Existing risk reduction technologies for adaptation purposes should be tailored and widely disseminated; existing institutions and mechanisms should be strengthened (ISDR, MISC.6; IASC/ISDR, MISC.6/Add.1 and risk workshop); and an integrated approach that covers all aspects of the BAP must be taken (IASC/ISDR, risk workshop);
- (d) Risk management should include sector-specific risk reduction plans, risk assessments, national planning, early warning and preparedness, risk economics and financing, and knowledge and tools development (IASC/ISDR, risk workshop);
- (e) Social and economic development is essential for reducing risk (IASC/ISDR, MISC.6/Add.1);
- (f) There is a need to promote a preventive approach to climate change in the workplace (ILO, MISC.6/Add.2);
- (g) Collaborative mechanisms should be developed to facilitate needs- and requirements-driven activities in climate-related risk management (WMO, MISC.6);
- (h) An adequate focus on the socio-economic and political dimensions of managing climate risks should be ensured, in consultation with the disaster-risk-management community. It should also be ensured that adaptation is informed by successful community-based experiences in vulnerability reduction (Tearfund);
- (i) A climate risk management module should be established to facilitate adaptation; it should have two pillars: a prevention pillar and an insurance pillar (MCII) (see also chapter VI);
- (j) A mechanism needs to be developed for sharing the information and tools required to enable the prompt development of: national and regional risk and capacity baselines, especially in high-risk areas (ISDR, MISC.6); and national systems for tracking investment in, and results of, activities in risk reduction and adaptation (IASC/ISDR, MISC.6/Add.1);
- (k) Existing regional centres and mechanisms that address risk management for sectors such as water, agriculture, health, and humanitarian response need to be strengthened, and a local adaptation network needs to be created (ISDR, MISC.6; IASC/ISDR, MISC.6/Add.1);
- (l) Collaboration with local governments and community organizations with experience in risk reduction should be formalized (ISDR, MISC.6), while community-based adaptation should be implemented (IASC/ISDR, MISC.6/Add.1).

C. Disaster reduction strategies and means to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change

1. Input by Parties

119. On **context**, Parties noted that:

- (a) Mainstreaming climate change and disaster risk reduction can be mutually reinforcing, and building climate resilience often also enhances resilience to disasters (Indonesia, MISC.1; Australia, MISC.2/Add.1; AOSIS, MISC.5/Add.2);
- (b) The finance and insurance industries have a role to play in disaster relief, loss transfer and sharing, and post-disaster reconstruction (China, risk workshop).

120. Parties proposed:

- (a) Enhancing developing countries' capacity for the prevention, early warning and proper management of disasters (China, MISC.1 and risk workshop);
- (b) Capacity-building, to include institutional capacity and capacity for preventive measures; planning; monitoring and early warning systems; research for science and technology; outreach and training integrated disaster assessments; emergency response; risk management; national programmes; and preparation for disasters relating to climate change (China, adaptation and risk workshops);
- (c) The development of methodologies and an outline for disaster reduction strategies (LDCs, MISC.1), including a multi-window mechanism (AOSIS, MISC.5/Add.2);
- (d) Cooperation and collaboration at all levels and cooperation between research projects (Russian Federation, MISC.5/Add.2; China, risk workshop), particularly in the disaster risk management and climate change communities, namely between the ISDR, IASC and UNFCCC in the area of information and resource sharing (EC and its member States, MISC.5/Add.1);
- (e) A methodological framework approach with compability between disaster risk reduction and adaptation utilizing participation and ancestral knowledge is needed (Peru, risk workshop);
- (f) Assessing the links between disaster risk reduction strategies and adaptation (Uzbekistan, MISC.1; Tuvalu, MISC.1/Add.3), and, where appropriate, including adaptation measures in disaster management plans (Singapore, MISC.2), as well as integrating disaster risk reduction and management into adaptation frameworks (China, risk workshop).

2. Input by observer organizations

121. Organizations proposed that:

- (a) There is a need to assess risks and capacities, strengthen early warning systems, implement disaster-reducing activities as part of sector-specific adaptation plans, and update emergency preparedness and response programmes and contingency plans (ISDR, MISC.6; IASC/ISDR, MISC.6/Add.1);
- (b) The preparation and implementation of national adaptation plans should include strong inter-ministerial and multi-stakeholder platforms or committees addressing disaster risk reduction that comprise all relevant sectors and that include private sector, scientific and other civil society representation (ISDR, MISC.6);

- (c) A risk management framework be established, comprising a prevention pillar and an insurance pillar (MCII, risk workshop);
- (d) Parties should ensure the mainstreaming of technical capacities in the national disaster risk management plans, legislation and development planning (WMO, MISC.6);
- (e) There should be support for the replication of successful initiatives in community-based disaster risk reduction and community-based adaptation to strengthen people's livelihoods resilience (ISDR, MISC.6);
- (f) Parties should draw upon the Hyogo Framework in the design and implementation of adaptation actions (ISDR, MISC.6; Tearfund), that adaptation efforts should take advantage of the multi-stakeholder ISDR system, that technical institutional capacities at international, regional and national levels should be strengthened (ISDR, MISC.6), and that disaster risk reduction methodologies and tools for scaling-up should be prioritized (ISDR, MISC.6);
- (g) The use of existing disaster risk reduction tools that have proven to be effective should be prioritized (IASC/ISDR, MISC.6/Add.1) and scaled up (Tearfund), and disaster risk reduction should be integrated into national planning (IASC/ISDR, risk workshop);
- (h) Existing regional centres and mechanisms that address disaster risk reduction for sectors should be strengthened (ISDR, MISC.6);
- (i) Systematic dialogue, information exchange and joint working between climate change and disaster reduction bodies, focal points and experts, in collaboration with development policy-makers and practitioners should be encouraged, and there should be increased collaboration between the climate change adaptation and disaster risk management communities (Tearfund).

D. Economic diversification to build resilience

1. Input by Parties

122. Parties proposed that:

- (a) Economic diversification should be considered as being integral to the dual goals of building resilience to climate change and achieving sustainable development (Australia, MISC.2/Add.1);
- (b) Support to identify options and build capacity for SIDS to diversify their economies is required (AOSIS, MISC.5/Add.2);
- (c) There is a need for institutional capacity-building as well as a regulatory framework that contributes to diversifying economic activities and to strengthening economic resilience, and that should be part of national adaptation planning (Argentina, MISC.5).

2. Input by observer organizations

123. Organizations proposed that economic diversification policies should be organized within sectors or by the promotion of new activities from other economic sectors, and that all stakeholders be consulted (ITUC); new activities in other economic sectors should be proposed for workers in sectors at risk, and social dialogue with all stakeholders at all levels needs to be undertaken in an institutionalized manner (ILO, MISC.5/Add.2).

E. Ways to strengthen the catalytic role of the Convention in encouraging multilateral bodies, the public and private sectors and civil society, building on synergies among activities and processes, as a means to support adaptation in a coherent and integrated manner

Input by Parties

124. Parties noted that there is potential for the UNFCCC to play a key role and demonstrate greater leadership in terms of guidance, coordination and mobilizing adaptation action (EC and its member States, MISC.2; AOSIS, Norway, MISC.5/Add.2; AOSIS, shared vision workshop) (see also chapter II).

125. Parties proposed the following:

- (a) The consideration of processes leading to adaptation to climate change should remain under the umbrella of the UNFCCC (Argentina, MISC.1; AOSIS, MISC.5/Add.2);
- (b) The UNFCCC should catalyse/leverage action at multiple levels, provide guidance/support for development of national adaptation programs, encourage flexible, practical approaches aimed at on-the-ground results, and be consistent with UNFCCC obligations (United States, adaptation workshop), so as to orientate actions at all levels towards adaptation, and to generate resources for these efforts (United States, MISC.1). At all levels, existing institutions, networks, and resources already engaged in enhancing climate resilience need to be leveraged, including for the sharing of information and expertise, financing, and facilitating planning and implementation of adaptation activities (see also chapter VI). A framework for adaptation should be designed to catalyse greater attention to adaptation at all levels and should galvanize national and international support for adaptation priorities in a range of sectors (United States, MISC.5);
- (c) The UNFCCC should catalyse action at the local level, including by facilitating the provision of appropriate and to-scale information on the scientific and technical aspects of adaptation to decision-makers (Australia, MISC.5/Add.2);
- (d) Coherence in the way that adaptation issues are addressed under the UNFCCC should be promoted (African Group, MISC.2/Add.1). The UNFCCC should catalyse partnerships among companies and research institutions in developed and developing countries as a useful tool for establishing national and regional centres (Brazil, MISC.5). The UNFCCC should also catalyse and support partnerships between the private sector, the public sector and other stakeholders at different levels and across all regions and sectors, to work towards enhanced, synergised and effective adaptation (EC and its member States, MISC.5/Add.1);
- (e) An appropriate mechanism to encourage engagement should be developed, building on the strengths of the UNFCCC in facilitation and coordination (Canada, MISC.1/Add.2). A national coordination mechanism, with technical capacity, supported by the Convention, would be an important element in the effective implementation of adaptation provisions (Brazil, MISC.5);
- (f) With regard to risk management, the UNFCCC should strengthen links with the Hyogo Framework for Action (United States, MISC.5/Add.2), make use of existing networks and institutions, facilitate cooperation and information exchange, raise the political profile (EC and its member States, risk workshop), and catalyse new and innovative products such as microinsurance (Bangladesh, risk workshop); and other resources for assisting SIDS and LDCs with coping with the additional burden of climate change (AOSIS, MISC.5/Add.2);

- (g) The role of the UNFCCC's role should be focused on determining a mechanism for raising significantly increased financing for adaptation, and agreeing on a method for prioritizing support (Australia, MISC.5/Add.2);
- (h) The UNFCCC secretariat should provide a link between those countries and agencies supporting adaptation efforts to help coordinate collective action on adaptation (Australia, Iceland, MISC.5/Add.2); catalytic support from United Nations-wide agencies and institutions and a harmonization of activities is needed (LDCs, adaptation workshop).

V. Enhanced action on technology development and transfer to support action on mitigation and adaptation

126. In addition to the assembly of ideas and proposals presented below, the discussion on this element of the BAP is also reflected in the LCA chair's summaries. Please refer to document FCCC/AWGLCA/2008/6, paragraphs 40–56, document FCCC/AWGLCA/2008/11, paragraphs 45–53, and document FCCC/AWGLCA/2008/13, paragraphs 29–38.

A. Effective mechanisms and enhanced means for the removal of obstacles to, and provision of financial and other incentives for, scaling up of the development and transfer of technology to developing country Parties in order to promote access to affordable environmentally sound technologies

1. Input by Parties

127. As **general principles**, Parties proposed that effective mechanisms and enhanced means for the removal of the obstacles to, and provision of financial and other incentives for, scaling up the development and transfer of technologies for mitigation and adaptation should:

- (a) Be comprehensive to address all the stages of the technology development cycle; namely, R&D, demonstration, deployment and diffusion (Brazil, G77 and China, MISC.5; EC and its member States, technology workshop);
- (b) Be guided by the provisions of the Convention, particularly Article 4, paragraphs 3 and 5, and be built on existing activities within the Convention, including the work of the Expert Group on Technology Transfer (EGTT), and integrate expanding and ongoing activities relating to technology (Rwanda, MISC.1; Brazil, G77 and China, MISC.5);
- (c) Focus on issues and areas where they make a real impact on the overall technology challenges, and be built on the existing technology transfer framework established by decision 4/CP.7 and the additional set of actions to enhance implementation of Article 4.1 (c) and 4.5 of the Convention adopted by decisions 3/CP.13 and 4/CP.13 (EC and its member States, MISC.5/Add.1);
- (d) Be guided by a vision that ensures a climate change regime which deals with technology diffusion effectively (EC and its member States, MISC.5) and be informed by the shared vision for long-term cooperative action, including a long-term global goal for emission reductions, to achieve the ultimate objective of the Convention and the urgent need for adaptation to the impacts of climate change (Ghana, MISC.2/Add.1);
- (e) Aim to achieve the accessibility, affordability, appropriateness and adaptability of technologies required by developing countries for enhanced action on mitigation and adaptation (G77 and China, MISC.5);
- (f) Stimulate formation and development of national and international innovation systems and markets for technologies for mitigation and adaptation and create favourable

investment and enabling environments, and engage the private sector (EC and its member States, technology workshop);

- (g) Enhance the global development and uptake of mitigation- and adaptation-related technologies, particularly through improved trade and investment flows and by using markets. They should also address clearly demonstrated needs, market failures and/or other identified policy/regulatory barriers (Australia, Canada, MISC.5/Add.2);
- (h) Facilitate the creation of effective domestic environments for innovation and dissemination of environmentally sound technologies in the context of mitigation and adaptation strategies (United States, MISC.6/Add.2).

128. On **institutional arrangements**, Parties proposed that:

- (a) A technology mechanism should be established under the Convention, to include an Executive Body on Technology established as a subsidiary body of the Convention in accordance with Article 7 (2) (i), and a Multilateral Climate Technology Fund (MCTF) operating under the guidance of the COP. The Executive Body, supported by technical panels and the secretariat, will develop strategy, provide guidance and verify financial and technological contributions (G77 and China, MISC.5; China, Ghana, FCCC/AWGLCA/2008/11);
- (b) An enhanced framework for technology should be developed, taking into account the institutional needs for adaptation and mitigation to support delivery of the technology provisions of the Convention in the future climate change agreement. Such a framework will guide, support, verify and monitor activities and commitments related to technology within and outside the Convention, and provide a “home” for technology information dissemination (EC and its member States, MISC.5/Add.1);
- (c) A technology transfer mechanism, financed by a fund or body under the Convention, tailored to the needs of Parties not included in Annex II of the Convention, and formed with contributions of Annex II Parties as per Article 4, paragraphs 3, 4 and 5, of the Convention, should be established. In this mechanism, concessionary loans, export loans or tax incentives could be used to attract investment in technology development and transfer (Turkey, MISC.5/Add.2);
- (d) A mechanism that collectively evaluates, approves and promotes technology development and diffusion should be established. Solutions need to be tailored to different requirements and capabilities of countries. Existing instruments should be deployed to the extent possible (Iceland, MISC.5/Add.2);
- (e) Existing processes and mechanisms should be used (Australia, Canada, MISC.5/Add.2). Enhancing financial and technology promotion tools does not necessarily mean creating new institutions under the Convention (United States, MISC.5).

129. Mechanisms to address **intellectual property right issue** were proposed by Parties, including:

- (a) Appropriate mechanisms to promote actions leading to technology development, deployment, diffusion, and transfer taking into account intellectual property issues (Argentina, MISC.1); a suitable IPR regime for accessing technologies owned by the private sector in developed countries (India, technology workshop);
- (b) An IPR sharing arrangement for joint development of ESTs (China, MISC.5); criteria on compulsory licensing for patented ESTs; joint technological or patent pools to disseminate technologies to developing countries at low cost; and limited-time patents and the provision of incentives (tax exemption, subsidies, etc.) for the owner of

technology for differential pricing (China, MISC.5; Pakistan, Bolivia, MISC.5/Add.2; India, sectoral approach workshop);

- (c) Considering new approaches that combine IPR protection and facilitate technology sharing, bearing in mind the example set by decisions in other relevant international forums relating to IPRs, such as the Doha Declaration on the TRIPS Agreement and Public Health (Brazil, MISC.5);
- (d) Strengthening, on an individual Party basis, of legal and economic institutions to promote the protection and enforcement of IPR, promote competitive and open markets for ESTs, and provide a well-defined, efficient and transparent system of contract enforcement (United States, MISC.6/Add.2);
- (e) Ways to examine the benefits of innovation protection systems and how joint R&D collaboration among developed and developing Parties could instil IPR and bring co-benefits such as endogenous technology development (Canada, MISC.1/Add.2);
- (f) Mechanisms to ensure protection of IPR and guarantee access to and use of technologies by avoiding over-protectionism (Ghana, MISC.2/Add.1);
- (g) Appropriate and accessible intellectual property (IP) licensing models to improve IP protection and reduce project development costs, to should be developed by the EGTT, in conjunction with relevant financial experts (Australia, MISC.5/Add.2);
- (h) Government licensing of publicly funded technologies that offer global benefits by addressing climate change (Indonesia, MISC.5/Add.2; Republic of Korea, R&D workshop);
- (i) Expansion of the public domain for publicly funded technologies; and exemptions for climate-friendly technologies (Bolivia, MISC.5/Add.2).

130. Parties also proposed **ideas on the provision of financial resources** (see chapter VI).

131. On the **strategy on disbursement of financial resources**, Parties proposed:

- (a) Developing a technology action plan that define specific policies, actions and funding requirements for all relevant technologies, on public domain, patented and future technologies (G77 and China, MISC.5);
- (b) Developing a package of means for implementing for technology, finance and capacity-building sectors. Each developing country can define a package suitable for its individual needs (South Africa, technology workshop);
- (c) Funding mechanisms following the model of the Montreal Protocol's Multilateral Fund to ensure the rapid diffusion and absorption of technologies needed for mitigation and adaptation (Micronesia (Federated States of), MISC.1);
- (d) Comprehensive incentive mechanisms that can prompt mitigation actions and enable capacity-building; a technology transfer fund for financing technology transfer to enable easy access to all developing countries regardless of their status in the annexes of the Convention (Turkey, MISC.5); and a clean technology fund, to promote technical assistance for projects, as well as transfer, development, demonstration and dissemination of technologies that are close to acquiring commercial status (Mexico, MISC.2);
- (e) Establishing joint ventures to accelerate deployment and diffusion of technologies. These will contribute to effectively dealing with IPR issues by sharing these rights among Parties involved (Argentina, MISC.5);

- (f) A “technology leveraging facility” to assist in matching technology needs assessment (TNA) outcomes with available private/public carbon financing. This could be modelled after the private financing access model developed by the Climate Technology Initiative (CTI) and would help to promote closer collaboration with international financial institutions and multilateral development banks. Such a facility could be supported initially through a refocusing of existing technology-based funds under the GEF (Australia, MISC.5/Add.2).
132. On the **provision of other incentives**, specific proposals include:
- (a) Incentives to stimulate technology transfer within companies, with a view to strengthening capacity in subsidiary companies located in developing countries (Brazil, MISC.5);
- (b) An international mechanism that could lead to rewards/credits for participation in development and transfer climate friendly technologies through a link with Parties’ commitments in terms of quantified emission limitation and reduction obligations. (Ghana, MISC.2/Add.1 and FCCC/AWGLCA/2008/11);
- (c) Carbon credit for NAMAs of developing countries established under the UNFCCC as one of the means of the finance and technology transfer mechanism for the BAP. Revenue from the sales of the credits will channel the financial resources and technologies necessary for the NAMAs of developing countries (Republic of Korea, MISC.5 and FCCC/AWGLCA/2008/11);
- (d) Carbon market mechanisms to drive developed countries to finance the full incremental costs, including the cost of enabling activities, technology application and deployment necessary for the implementation of GHG mitigation activities in developing countries (Argentina, MISC.1);
- (e) Establishing an effective global agreement on climate change that sets a price on carbon to apply as broadly as possible, and sends a clear signal to the global investment community to set up and direct resources towards technology development and innovation (New Zealand, MISC.5);
- (f) Development of appropriate mechanisms and methodologies to provide incentives for transfer and deployment of clean technologies by setting up “developmental baseline” and “technology objective/target”, and promoting technologies for adaptation by identifying “additionality” opportunities (Trinidad and Tobago, MISC.5/Add.2);
- (g) Elimination of cross-border barriers to technology development and diffusion, and establishment of a common or harmonized global emissions trading system (Iceland, MISC.5/Add.2).
133. In addition to the proposals presented above, Parties also noted:
- (a) That financial transfers to the MCTF (see also chapter V) shall be counted as measurable, reportable and verifiable commitments under paragraph 1 (b) (ii) of the BAP. Any funding not under the authority and guidance of the UNFCCC shall not be regarded as the fulfilment of commitments by developed countries under Article 4.3 of the Convention or decision 1/CP.13 (G77 and China, MISC.5);
- (b) Considering ways and means of prohibiting the export to developing countries of environmentally unfriendly equipment, such as vehicles, refrigerators and others, that contribute to GHG emissions and ozone layer depletion (Rwanda, MISC.1); of banning the transfer of polluting industry from the North to the South including unsustainable

production systems and consumption patterns; and of promoting the transfer of green technology in energy and industry (LDCs, MISC.1);

- (c) That the technology pathway for adaptation may be different to those for mitigation. The characteristics of “enabling environments” need to reflect these differences. For example, the introduction of a carbon price will not provide an effective signal for R&D on adaptation technologies (New Zealand, MISC.5);
- (d) That technologies that address the adaptation needs of the most vulnerable States should receive the highest priority, along with renewable energy and energy efficiency technologies. The transfer of technology should be implemented in a manner that enables monitoring and verifying (AOSIS, MISC.5/Add.2).

2. Input from observer organizations

134. Observer organizations have also shared ideas and proposals on effective mechanisms for scaling up the development and transfer of technologies under the Convention. These include:

- (a) Assessing optimal choice of technology specific to each location and considering possible mechanisms to stimulate innovations with sustainability benefits and deal with risks associated with the new technologies (UNU, MISC.3);
- (b) Scaling up technological and financial resources to a sufficient magnitude (CAN) to create a new technology fund to support the deployment of existing technologies, including renewable energy, and capacity-building in the developing world, respecting IPR and promoting technology transfer via market mechanisms such as the CDM (GLOBE);
- (c) Compulsory licensing as an option, under certain circumstances, for developing countries to have access to ESTs which are crucial to adaptation and mitigation (TWN);
- (d) Creating incentive structures and appropriate conditions for climate-related technologies and business processes, and strengthening multilateral trade and investment that will support the economic and technological flows required to implement solutions, support energy access and contribute to economic prosperity (ICC);
- (e) Organizing the future technology efforts under the UNFCCC in a set of technology action programmes in five-year periods, with clear targets and an adequate working budget, supported by provisional technical expert panels created at COP 15 (WWF).

B. Ways to accelerate deployment, diffusion and transfer of affordable environmentally sound technologies

1. Input by Parties

135. On **general principles**, Parties proposed:

- (a) Building and enhancing capacity as an essential element for technology transfer, diffusion and deployment (LDCs, MISC.1) in order to ensure long-term sustainability (Sri Lanka, MISC.1);
- (b) Recognizing and building on the financial and technological capacity of the recipient country and effectively mobilizing investments from the private sector by boosting relevant national institutions and enabling environments (United States, MISC.5).

136. On ways to accelerate deployment, diffusion and transfer of technologies, specific proposals on capacity-building include:

- (a) Establishing national/regional technology centres of excellence to promote technology development, deployment and transfer, stimulate capacity-building, improve access to information, support an innovation culture and establish an appropriate international cooperation environment (Brazil, MISC.5);
- (b) A process of making an inventory (sector wise), facilitating modifications of different technologies including their scaling up, and facilitating/accelerating deployment, diffusion and cooperation on R&D of current, new and innovative technology, including win-win solutions (Bangladesh, MISC.1);
- (c) Strengthening technology adoption capacity. A critical mass of scientific and technical skills and infrastructure (e.g. laboratories, equipment and supporting institutions) is required for all developing countries to develop, adapt and identify the technologies specific to their needs and to introduce these technologies effectively into the market to provide the needed maintenance on a sustainable basis (Pakistan, MISC.1/Add.1);
- (d) Developing actions to enhance capacity-building at the institutional and the individual level (e.g. improving technical and policy skills and training, or providing assistance in developing national policies and measures) (Australia, MISC.5/Add.2);
- (e) Enhancing the capacity of the EGTT to provide technical advice (Australia, MISC.5/Add.2);
- (f) Giving higher priority to LDCs in the provision of support, mainly in the form of capacity-building for businesses on the demand side (Japan, MISC.5/Add.2);
- (g) Targeted capacity-building and associated technical assistance on an as-needed basis by developed country Parties and international organizations to help developing countries to better adopt, operate, maintain and diffuse ESTs (United States, technology workshop);
- (h) Developed country Parties scaling up their support for developing countries in TNA, capacity-building, national deployment schemes, and participation in voluntary technology-oriented agreements (EC and its member States, MISC.5/Add.1).

137. On strengthening **enabling environments**, specific proposals include:

- (a) Improving enabling environments for technology diffusion, including enhancing regulatory frameworks, fostering positive environments for investment, and providing incentives for private sector commercialization of clean development technologies and the associated IPR (Australia, MISC. 2/Add.1);
- (b) Requiring all Parties to improve enabling environments for technology diffusion by identifying and removing barriers to technology transfer in accordance with decision 4/CP.7; define, strengthen and implement, technology-specific policies and measures. These policies and measures should include deployment of low-carbon technologies and national energy and climate policies (EC and its member States, MISC.5/Add.1);
- (c) Legislative and policy reform in both developed and developing countries to facilitate effective participation of the private sector, such as incentives, addressing IPR issues and removal of barriers for the deployment and receipt of technologies (AOSIS, MISC.5/Add.2);

- (d) Considering how to enhance focus on enabling environments to attract investment for technology development, diffusion and transfer, and recognizing the critical catalytic role played by enabling environments in this regard (United States, MISC.5/Add.2);

2. Input from observer organizations

138. Observer organizations proposed some concrete ideas on ways to accelerate deployment, diffusion and transfer of affordable EST, which include:

- (a) Articulating efforts to promote technology transfer in the area of climate change mitigation in terms of strategies to foster the development of robust markets for cleaner energy technologies (UNEP);
- (b) Ensuring participation of local stakeholders in decisions on development and transfer of technologies; developing training programmes for workers and entrepreneurs in recipient countries; and avoiding a bottleneck effect due to the lack of a trained workforce (ITUC, ICC);
- (c) Liberalizing trade in environmentally sound goods and services by eliminating tariffs and non-tariff barriers (Keidanren);
- (d) Further clarifying additionality and baselines to support investments (ICC).

C. Cooperation on research and development of current, new and innovative technology, including win-win solutions

1. Input by Parties

139. On **concrete elements and means** to enhance cooperation on R&D, specific proposals include:

- (a) Enhancement of existing frameworks for international cooperation and establishment of new ones to accelerate innovative technology development in cooperation with relevant international organizations, through expanding investment in R&D, sharing technology roadmaps, and strengthening international cooperation (Japan, MISC.2 and MISC.5);
- (b) Prompting international R&D collaboration, exchange programmes for university and college students, expanding networks for knowledge sharing, climate and technology policy support, market assessment, and linking and reinforcing national climate technology centres (EC and its member States, MISC.2, technology workshop and R&D workshop);
- (c) Establishing an innovative mechanism to promote cooperation on R&D and transfer of appropriate adaptation technologies to developing countries (China, adaptation workshop and FCCC/AWGLCA/2008/11);
- (d) Developing collaborative sectoral approaches that can facilitate joint R&D and enable global best practice to be applied across a given sector (Australia, MISC.4/Add.1);
- (e) Identifying or establishing national and regional centres for undertaking R&D, including in the fields of impacts and vulnerability assessment, and for supporting adaptation R&D (Bangladesh, Brazil, China, India, technology and R&D workshops);
- (f) Establishing a network of climate technology development and diffusion centres to prompt joint R&D, to develop appropriate business models and to carry out policy and market research. The network should report to the COP, be governed by an international board with majority representation of non-Annex-I Parties, and be financed by contributions, principally from Annex-I Parties (India, R&D workshop);

- (g) Promoting joint R&D activities, particularly with developing countries, aiming to promote indigenous R&D capacity (Republic of Korea, R&D workshop);
- (h) Reinforcing North–South, South–South and triangular cooperation, including joint R&D (Brazil, technology workshop);
- (i) Encouraging foreign direct investment together with joint ventures for R&D in developing countries that will be able to overcome some of the problems of technology development, deployment and diffusion (Bangladesh, MISC.1);
- (j) Promoting greater cooperation on technology R&D by government and the public sectors including in developing necessary skill sets, and developing robust national systems of innovation (Australia, MISC.5/Add.2);
- (k) Prompting innovative R&D models for affordable technologies, including joint development of technologies involving the private sector in developing countries and models developed by the Consultative Group for International Agricultural Research, in which seed varieties and innovations are not patented, allowing for diffusion in developing countries (G77 and China, R&D workshop);
- (l) Establishing clear and mutually agreeable processes to manage IP issues and disburse technology outcomes (Australia, China, R&D workshop);
- (m) Establishing a special panel on R&D cooperation under a proposed Subsidiary Body of Development and Transfer of ESTs, to develop R&D plans at the regional and national levels (China, R&D workshop);
- (n) Promotion of joint R&D of technologies (particularly for adaptation) by developed and developing countries carried out by research, academic and government institutions, particularly for adaptation. Such research can secure joint IPRs (AOSIS, MISC.5/Add.2).

140. On **specific sectors and technologies to enhance cooperation on R&D**, specific proposals include:

- (a) CCS, solar electricity, biofuels, system integration of renewables, and energy efficiency in buildings, transport and industry, as well as observation tools including early warning systems (EC and its member States, R&D workshop);
- (b) Developing a balanced portfolio of technology interests which accord with national priorities (CCS, renewable technologies and adaptation-related research) (Australia, R&D workshop);
- (c) Crop diversification, varietal improvement, low-carbon technology and energy efficiency; irrigation, flood control, drought management, and modernization of early warning systems covering drought, flood and cyclones (Bangladesh, R&D workshop);
- (d) Identification of priority areas following at series of criteria in a balanced manner (China, R&D workshop);
- (e) Joint R&D programmes giving priority to areas in which GHG emissions, potential for technological progress is large, and costs are high, such as CCS (Norway, R&D workshop);
- (f) CCS, nuclear power, renewable energy and improvement in energy efficiency (United States, R&D workshop).

2. Input from observer organizations

141. Observer organizations submitted some proposals on cooperation on R&D, which include:
- (a) Promoting R&D on concentrated solar power technology (UNU, MISC.3);
 - (b) Doubling global financial support for R&D (GLOBE);
 - (c) Funding for domestic research, development and innovation in developing countries, as it is also a means for building local capacities and use local knowledge (ITUC).
 - (d) Encouraging and facilitating increased investment for R&D in energy efficient end-use technologies (UNIDO/IAEA, MISC.6);
 - (e) Enhancing support of research activities with regard to analysing and modelling extreme events (WMO, MISC.6);
 - (f) Prompting R&D activities on alternative fuels for aviation, which could be a win-win solution in that it will reduce aviation's dependence on climate-changing fossil fuels while stabilizing the economic volatility associated with conventional fuels (ICAO, MISC.6/Add.1).

D. The effectiveness of mechanisms and tools for technology cooperation in specific sectors

1. Input by Parties

142. As **general principles**, Parties noted that:
- (a) Cooperative sectoral approaches and sector-specific actions shall enhance the implementation of Article 4, paragraph 1 (c), of the Convention (China, MISC.5). It is important that discussions focus on the specific technology development and transfer objectives set out in Article 4.1 (c) and the BAP. They should not, for example, serve as a pretext for introducing a broader discussion of approaches targeting sectoral emissions that could be used by Annex I Parties to reach their emission reduction targets; such approaches being addressed in the Ad Hoc Working Group on Further Commitments for Annex I Parties under the KP (AWG-KP) (Argentina, MISC.5);
 - (b) Cooperative sectoral approaches will realize effective reductions in developing countries through technological cooperation and will contribute to the development of measurable, reportable and verifiable actions by developing countries. (Japan, MISC.2);
 - (c) Cooperative approaches based on technology cooperation and/or domestic sectoral mitigation policies could contribute to removing barriers that are specific to certain sectors, increasing technology deployment and enhancing technology research, development and diffusion in key sectors in developing countries (EC and its member States, MISC.4);
 - (d) The AWG process could elaborate the essential elements of technology cooperation, including its drivers, means and the roles of partners (governments, private sector and academia) and take into consideration the ongoing collaborative work by developed and developing countries in other forums such as the Asia–Pacific Partnership, Asia–Pacific Economic Cooperation, the IEA and numerous bilateral and multilateral technology partnerships (Canada, MISC.1/Add.2).
143. On a **framework and mechanisms** for technology cooperation in specific sectors, Parties proposed:

- (a) The establishment and recognition under the UNFCCC of focused, voluntary technology-oriented agreements. Such cooperative agreements would include, inter alia, cooperative R&D and large-scale demonstration projects, technology deployment projects, cooperation on specific sectors or gases, such as fluorinated gases, and cooperation on climate observation and warning systems (EC and its member States, MISC.5/Add.1);
- (b) Strengthening the catalytic role of the Convention to promote and facilitate multilateral technology cooperation within and outside the Convention, and building upon existing initiatives/institutions. In this regard, Parties could make an explicit political commitment to actively promote and resource global technology cooperation (New Zealand, MISC.5);
- (c) Initiatives by Annex I Parties to assist non-Annex I Parties in technology development and deployment of strategies for key sectors (Uzbekistan, MISC.1);
- (d) Establishing an advisory group for sectoral technology cooperation to support NAMAs by developing countries that would focus on: identification of effective technologies; analysis of the current situation of technology transfer, and barriers to it; identification of measures to accelerate technology transfer and reviewing the results of these measures; providing advice for further actions by sector; and regularly reporting on outcomes to the COP or an equivalent body (Japan, MISC.5/Add.2 and R&D workshop);
- (e) Setting up a scheme to quantify efforts to transfer and disseminate best practices and best available technologies to developing countries and to prioritize introduction of technologies by simplifying conditions and procedures for project-based mechanisms (Japan, MISC.4);
- (f) Identifying the mitigation and adaptation potentials of the technologies and establishing a cooperation mechanism between developed and developing countries to facilitate technology development and transfer. Developing countries need not only transfer of technology but also diffusion of related know-how through cooperative actions (Turkey, MISC.5);
- (g) Establishing a technology board with sectoral-technology panels to accredit international action on the development and transfer of technologies, endorse country programmes and monitor, report and verify action (Brazil, technology workshop);
- (h) A technological information transfer agreement with the aim of facilitating global availability of environmental-friendly products and manufacturing systems, be elaborated by the relevant Parties (Turkey, MISC.5/Add.2).

144. On **tools and concrete approaches**, Parties proposed the following:

- (a) For cooperation in specific sectors, all countries should clearly articulate technology needs, including identifying where significant information gaps or barriers exist and areas where potential future technologies could enable additional mitigation (New Zealand, MISC.5);
- (b) Developing countries need help to identify their needs in particular areas, the technologies available to meet these needs, the barriers to transfer of these technologies, and their financial, capacity and other requirements (Argentina, MISC.5);
- (c) Priority areas should be identified sector by sector and technology by technology. Most climate sensitive sectors, including GHG-intensive and climate-vulnerable sectors, should be fully considered for development, transfer and deployment of ESTs. A list of major ESTs needs shall be assessed on a regular basis with analyses of reliability, costs,

- penetration range, sectoral shares of market production capacity and market obstacles. Measures should be taken to overcome obstacles of development, transfer and deployment in specific sectoral context (China, MISC.5);
- (d) Improving TNAs and their use on the basis of the 2006 technology needs assessment review; expanding their scope to cover in-depth assessments of obstacles to the functioning of relevant technology innovation systems; and carry out detailed assessment of technology capacity and markets. These assessments should be made publicly available (e.g. through national communications) (EC and its member States, MISC.5/Add.1);
 - (e) Re-evaluating the current TNA process in order to streamline the process and engage relevant stakeholders, including from within national governments, in order to share lessons learned from the development and application of the NAPA process (Australia, MISC.5/Add.2);
 - (f) Identifying technologies to be deployed, and matching companies that own technologies with those that require the technologies (Japan, MISC.5/Add.2);
 - (g) Improving information exchange on mitigation- and adaptation-related technology and access to suppliers and products for developing countries. This could build on the foundation of the technology information clearing house (TT:CLEAR) (Australia, MISC.5/Add.2);
 - (h) Encouraging cooperative partnerships between governments and industry to promote the development, diffusion and transfer of technologies (United States, MISC.6/Add.2);
 - (i) Developing a sector-specific technology information platform/system to collect information on technologies and best practices, including on IPR and licensing, availability, costs, abatement potentials, and manufacturers of technologies (EC and its member States, MISC.5/Add.1; Turkey, MISC.5/Add.2);
 - (j) An inventory of technology and best practices by sector should be established to provide ready access to information necessary for a sectoral approach (Bangladesh, sectoral approach workshop);
 - (k) Identification, development and implementation of appropriate technologies for SIDS (AOSIS, adaptation workshop);
 - (l) A structure for specific technological cooperation and technology transfer in accordance with country-specific needs should be widely introduced. A cooperative sectoral approach should include identification of sectors; review of best practices; assessment of technology installation status in developing countries; analysis of reduction potential and country-specific needs; and implementation of reviews (Japan, MISC.1/Add.1 and MISC.2) (e.g. a sector-specific cooperation under the Asia-Pacific Partnership (APP)). The approach should compile state-of-the-art technologies; estimate CO₂ reduction potential; dispatch experts to steel plants for appropriate advice; and determine the priority technologies (Japan, technology workshop);
 - (m) Agreeing on methodologies to determine baseline cost of technological change in specific sectors and technological areas (China, MISC.5);
 - (n) All Parties are to develop the regulatory framework (codes and norms) that allows for technology agreements in sectors where a focused technology focused approach may be appropriate (EC and its member States, technology workshop);

- (o) Development of appropriate modalities for North–South and South–South cooperation (Bangladesh, technology workshop);
 - (p) Considering new approaches that combine IPR protection and facilitate technological sharing, bearing in mind the example set by decisions in other relevant international forums relating to IPR, such as the Doha Declaration on the TRIPS Agreement and Public Health (Brazil, MISC.5).
145. On **specific sectors and technologies**, Parties proposed that:
- (a) Enhanced multilateral cooperation regarding agricultural emissions should be considered important and new initiatives are welcome in this regard (Argentina, MISC.1; New Zealand, MISC.5);
 - (b) Improved energy efficiency and renewable energies should be promoted (Argentina, MISC.1; Norway, Singapore, MISC.5);
 - (c) It should be imperative that investments be directed to climate-friendly energy technologies. Renewable energy is a viable alternative, particularly geothermal power and hydropower (Iceland, MISC.5/Add.2);
 - (d) Less carbon-intensive technologies should be given priority over those (e.g. nuclear) that may generate additional pollution challenges. Technologies such as CCS could be considered when outstanding issues including those related to monitoring, leakage and permanence are resolved (AOSIS, MISC.5/Add.2);
 - (e) The priority areas in strengthening the adaptive capacities of the most vulnerable countries could include technologies to facilitate monitoring, forecasting and modelling of climate change; for improving the resilience of agriculture to the impacts of climate change, and technologies for coastal zone management (EC and its member States, MISC.2);
 - (f) Bilateral channels should be encouraged, including for capacity-building and transfer of technology to stimulate REDD (Indonesia, forest workshop);
 - (g) It should be recognized that technology is sector-specific (South Africa, MISC.2/Add.1; Ghana, technology workshop). The efficiency of technologies for adaptation needs to be assessed. In some cases, modification would be necessary. There is also a need to assess the potential of scaling up different technologies to deal with specific problems, taking ecological and social circumstances into account (LDCs, MISC.1);
 - (h) CCS should be promoted as a key technology to address mitigation of climate change (Norway, MISC.5);
 - (i) International cooperation on nuclear energy should be promoted, taking into account the need for safeguards (nuclear non-proliferation), and for nuclear safety and security (Japan, MISC.2);
 - (j) It is especially important to focus on sectors with relatively homogenous technologies and to ensure international equity in these sectors, namely the iron and steel, cement, aluminium (industry), coal-fired generation (power generation) and road transport (transport) sectors (Japan, MISC.4);
 - (k) Technologies in the energy and transport sectors, including energy exploration technology (i.e. gas or coal or renewable sources of energy), efficiency improvement in the production and distribution of electricity, and efficient transport planning and overall

improvement in the fuel consumption in the transport sector, should be assessed for LDCs (LDCs, MISC.1).

2. Input from observer organizations

146. Several specific technologies and sectors were identified in the submissions of observer organizations; proposals to strengthen cooperation include:

- (a) Supporting the development and deployment of new technologies such as CCS; increasing international cooperation on public procurement, buildings, products, appliances and fuel-efficiency standards (GLOBE);
- (b) Directing investments relating to mitigation in the energy sector primarily into renewable energy and the most efficient and sustainable technologies available, rather than to nuclear power and CCS (CAN);
- (c) Advancing industrial energy efficiency under the Bali Road Map by institutionalizing the identification of the most effective energy-efficiency technologies and processes. Institutions should explore options to facilitate deployment of these technologies in developing and transition economies (UNIDO/IAEA, MISC.6).

VI. Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation

147. In addition to the assembly of ideas and proposals presented below, the discussion on this element of the BAP is also reflected in the summaries prepared by the Chair of the AWG-LCA. Refer to document FCCC/AWGLCA/2008/6, paragraphs 57–62, document FCCC/AWGLCA/2008/11, paragraphs 54–63 and document FCCC/AWGLCA/2008/13, paragraphs 39–55.

148. Parties and observer organizations, through their submissions, have covered various aspects of providing financial resources and investment to support action on mitigation and adaptation and technology cooperation, including:

- (a) Principles for the provision of new and additional financial resources and investment;
- (b) Generation of new and additional financial resources and investment;
- (c) Institutional arrangements for the provision of financial resources and investment;
- (d) Disbursement of, and improved access to, financial resources and investment for enhanced implementation of national mitigation strategies and adaptation action.

149. These aspects also reflect the discussions on a financial framework at the second and third sessions of the AWG-LCA. The ideas and proposal are assembled under three headings, using the subparagraphs of paragraph 1 (e) of the BAP. The first two headings are combinations of subparagraphs of paragraph 1 (e), the first representing aspects of new and additional resources, positive incentives, mobilization of public- and private-sector funding and investment, and disbursement of and access to the funds, and the second representing incentives and innovative funding for adaptation actions by developing countries. As mentioned in paragraph 149 (c) below, Party proposals also cover the issue of institutional arrangements, which is presented in the third heading. This chapter is therefore structured as follows:

- (a) **Improved access to, disbursement of, and provision of new and additional resources including positive incentives to developing country Parties and mobilization of public- and private-sector funding and investment.** This covers subparagraphs (i), (ii) and (v) of paragraph 1 (e): subparagraph (i) – Improved access to adequate, predictable

and sustainable financial resources and financial and technical support, and the provision of new and additional resources, including official and concessional funding for developing country Parties; subparagraph (ii) – positive incentives for developing country Parties for the enhanced implementation of national mitigation strategies and adaptation action; and subparagraph (v) – mobilization of public- and private-sector funding and investment, including facilitation of climate-friendly investment choices;

- (b) **Means to incentivize adaptation actions and innovating means funding to developing country Parties for meeting cost of adaptation, including technical support for capacity-building in assessment of adaptation costs:** This covers subparagraphs (iii), (iv) and (vi) of paragraph 1 (e): subparagraph (iii) – innovative means of funding to assist developing country Parties that are particularly vulnerable to the adverse impacts of climate change in meeting the cost of adaptation; subparagraph (iv) – Means to incentivize the implementation of adaptation actions on the basis of sustainable development policies; and subparagraph (vi) – financial and technical support for capacity-building in the assessment of the costs of adaptation in developing countries, in particular the most vulnerable ones, to aid in determining their financial needs;
- (c) Other issues: proposals submitted on institutional arrangements for the provision of financial resources and investments.

A. Improved access to, disbursement of, and provision of new and additional resources including positive incentives to developing country Parties and mobilization of public- and private-sector funding and investment

150. Parties and observer organizations, through their submissions, have elaborated ideas and proposals for the provision of new and additional resources, including different sources, mechanisms and criteria for resource generation, as well as access to and disbursement of resources.

151. Further, Parties and observer organizations, through their submissions, have proposed principles for provision of new and additional resources and mobilization of public- and private-sector funding and investments.

1. Input from Parties

152. On **characterizing the provision of new and additional resources**, Parties proposed that these be:

- (a) New and additional (EC and its member States, MISC.5/Add.2), i.e. over and above the target of 0.7 GNP for Official Development Assistance (ODA) (Singapore, MISC.2; AOSIS, G77 and China, African Group, MISC.2/Add.1; Argentina, Brazil, China, MISC.5; Colombia, India, MISC.5/Add.1; AOSIS, MISC.5/Add.2; LDCs, finance workshop; G77 and China, LDCs, shared vision workshop);
- (b) Adequate (Singapore, MISC.2; AOSIS, G77 and China, MISC.2/Add.1, China, MISC.5; India, MISC.5/Add.1; AOSIS, Canada, EC and its member States, Micronesia (Federated States of), MISC.5/Add.2; LDCs, finance workshop; G77 and China, shared vision workshop);
- (c) Measurable, reportable and verifiable (Saudi Arabia, MISC.1; Australia, G77 and China, MISC.2/Add.1) with clear targets and timelines (Gambia, adaptation workshop);
- (d) Predictable (Singapore, MISC.2; AOSIS, G77 and China, MISC.2/Add.1; Brazil, China, Norway, MISC.5; Colombia, India, MISC.5/Add.1; AOSIS, Canada, EC and its member States, Micronesia (Federated States of), MISC.5/Add.2; LDCs, finance workshop; G77 and China, shared vision workshop);

- (e) Automatic (India, MISC.5/Add.1);
- (f) Reliable (Norway, MISC.5);
- (g) Stable (G77 and China, MISC.2/Add.1; Colombia, MISC.5/Add.1; AOSIS, technology workshop);
- (h) Sustainable (Singapore, MISC.2; Australia, Canada, EC and its member States, MISC.5/Add.2);
- (i) Timely (AOSIS, G77 and China, MISC.2/Add.1);
- (j) Inclusive, financially feasible, and able to broaden the scale of mitigation and adaptation activities (Mexico, MISC.2);
- (k) Coherent, flexible, and able to mobilize all sources of finance (South Africa, MISC.5);
- (l) Clear, transparent and sustained new financial flows to sustain mitigation efforts (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5).

153. On **provision of new and additional** resources by Parties, Parties proposed that:

- (a) Provision should be based on:
 - (i) Common but differentiated responsibilities (Mexico, MISC.2; G77 and China, MISC.2/Add.1; Switzerland and Turkey, MISC.5; Colombia, MISC.5/Add.1) and respective capabilities (AOSIS, EC and its member States, MISC.5/Add.2);
 - (ii) Legally binding commitments of developed country Parties to provide funding to developing country Parties as detailed in Article 4.1, 4.3, 4.4, 4.5, 4.8 and 4.9 of the Convention (India, MISC.5/Add.1);
 - (iii) Historical responsibility (AOSIS, Micronesia (Federated States of), MISC.5/Add.2);
 - (iv) The “polluter pays” principle (Mexico, MISC.2; Switzerland, MISC.5; AOSIS, MISC.5/Add.2);
 - (v) Equity (EC and its member states, Mexico, MISC.2; G77 and China, MISC.2/Add.1; LDCs, finance workshop; Turkey, MISC.5; Australia, MISC.5/Add.2);
 - (vi) Efficiency and payment capacity (Mexico, MISC.2);
- (b) Resources should be generated by:
 - (i) Developed country Parties and other developed Parties included in Annex II (G77 and China, MISC.2/Add.1; China, Turkey, MISC.5; India, MISC.5/Add.1);
 - (ii) An expanded number of countries included in Annex II based on capacity and national circumstances, for example, measured in GDP per capita (Australia, MISC.2/Add.1; New Zealand, MISC.5);
 - (iii) All countries in strict accordance with the principle of common but differentiated responsibilities and respective capabilities (Mexico, MISC.2);
 - (iv) Processes that are independent of national budgetary processes (Norway, MISC.5/Add.2);

- (c) Resources should be provided by Parties on the basis of, or taking into account, the following **criteria and indicators**:
- (i) Current (India, MISC.5/Add.1) GHG emissions (AOSIS, MISC.2/Add.1) and/or GHG per capita (Mexico, MISC.2);
 - (ii) Historical contribution to, and the responsibility for climate change/GHG emissions (Argentina, MISC.5; India, MISC.5/Add.1; Algeria, MISC.5/Add.2);
 - (iii) National circumstances (Argentina, MISC.5);
 - (iv) National capabilities based on current economic realities (Australia, MISC.5/Add.2);
 - (v) GDP (Mexico, MISC.2) and/or GDP per capita (Mexico, MISC.2; India, MISC.5/Add.1);
 - (vi) Size of a national economy relative to the global economy (Mexico, MISC.2);
 - (vii) Population (Mexico, MISC.2);
 - (viii) The financial resources required to avoid any welfare loss in developing countries from taking a low-emission path (Algeria, MISC.5/Add.2);
 - (ix) The financial resources equivalent in value to the cost of loss of development and of adapting to impacts of climate change in developing countries (Pakistan, MISC.5/Add.2);
 - (x) Which should be dynamically assessed and regularly updated, to reflect the changing contributions (EC and its member States, MISC.5/Add.2);
 - (xi) Contributions to funds under the UNFCCC, other multilateral funds, ODA, technology assistance, R&D and market investment (Japan, MISC.5);
- (d) On **contributions by** Parties, specific proposals are that:
- (i) The level of the new funding can be set at 0.5 to 1 per cent of the GNP of Annex I Parties (G77 and China, MISC.2/Add.1; China, MISC.5);
 - (ii) The annual level of funding should be equal to 0.5 per cent of the total GDP of the developed world (India, MISC.5/Add.1; Madagascar, South Africa, MISC.5/Add.2);
 - (iii) Developed countries should commit to a target of financial aid and technology transfer (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5).

154. On the **generation of resources**, Parties proposed:

- (a) Voluntary contributions (Tuvalu, forest workshop) and non-offset market arrangements (levy on international aviation and maritime transport, auctioning of allowances under a self-contained cap and trade regime for international transport, pledged percentage of auctioned national emission trading allowances, percentage of AAUs auctioned on the international market);
- (b) Granting funding or contributions on a voluntary basis from the private sector (India, MISC.5/Add.1). However, these should not be considered as traditional international transfers from North to South (Madagascar, MISC.5/Add.2);

- (c) Auctioning allowances or assigned amounts (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5) at the international level (Norway, MISC.5/Add.2);
- (d) Sector-based approaches as a means to transfer resources from developed countries to developing countries (Japan, Norway, MISC.5);
- (e) Market finance, such as loans on preferential terms, revolving credit, venture capital (South Africa, MISC.5);
- (f) That funding sources should not distort carbon markets (EC and its member States, MISC.5/Add.2).

155. On **generation of new and additional resources from fiscal measures**, Parties proposed:

- (a) Applying a uniform global levy on carbon of USD 2/t CO₂ on all fossil fuel emissions with a basic tax exemption of 1.5 t CO₂ eq per inhabitant (Sri Lanka, MISC.5; Switzerland, MISC.5 and FCCC/AWGLCA/2008/11), or a global levy on international monetary transactions (Madagascar, MISC.5/Add.2);
- (b) That permits in domestic cap and trade systems be auctioned in some developed countries (Mexico, MISC.2);
- (c) Expanding the CDM levy (Bangladesh, MISC.1);
- (d) Using existing mechanisms, such as CDM levy, to channel finance and investment into adaptation (EC and its member states, MISC.5/Add.2);
- (e) Taxing air travel (Bangladesh, MISC.1) and imposing levies on international travel or use of marine haulage (India, MISC.5/Add.1).

156. On **mobilization of the public-sector funding and investment**, Parties noted that:

- (a) Public-sector finance should be the main source of funding (Argentina, MISC.5) through the implementation of commitments under Article 4.3 of the Convention (G77 and China, MISC.2/Add.1, China, MISC.5);
- (b) Public-sector funding, on a concessional basis, should be significantly scaled up (Brazil, shared vision workshop);
- (c) Public funding, in particular development cooperation resources, has a role to play in financing adaptation (EC and its member States, MISC.2). In the poorest and most vulnerable countries, ODA will remain essential for adaptation (EC and its member States, MISC.5/Add.2);
- (d) The public sector has a limited role in transferring finance and technology to developing countries (Republic of Korea, MISC.2);
- (e) Public financing for technology should focus on market “gaps” identified at stages along the technology innovation chain (EC and its member States, MISC.5/Add.1);
- (f) Public investment both for mitigation technologies and for adaptation technologies is needed for scaling up and optimizing research, development and demonstration (R, D&D), with a reasonable share for energy efficiency and renewable energy (EC and its member States, MISC.5/Add.1);

- (g) Public financial assistance should be tailored to address specific market failures that act as barriers to private-sector investment (Australia, EC and its member States, MISC.5/Add.2);
- (h) Public financial flows remain essential for assisting countries to fulfil the requirements for a performance-based REDD mechanism (EC and its member States, forest workshop);
- (i) Investments from donor countries should be matched by requisite efforts in developing countries (United States, MISC.5);
- (j) All Parties need to increase the national resources they dedicate to climate change response measures (Australia, MISC.2/Add.1);
- (k) An international funding mechanism should be additional to other sources, rather than the only source of funding for national adaptation strategies (Russian Federation, MISC.5/Add.2).

157. On the **mobilization of public-sector funding outside the Convention**, Parties noted that:

- (a) There should be coherence and strong synergy between activities in the UNFCCC and related efforts (EC and its member States, MISC.2), utilizing the Convention as the fulcrum for action (AOSIS, MISC.5/Add.2);
- (b) Additional funding from multilateral financial institutions, under bilateral or multilateral development programmes, should be brought into line with the principles and objectives of the Convention (Argentina, MISC.5; AOSIS, MISC.5/Add.2);
- (c) All activities relevant to climate change undertaken outside the framework of the financial mechanism in line with decision 11/CP.1, paragraph 2 (a), should be consistent with the policies, programme priorities, and eligibility criteria adopted by the decisions of the COP (G77 and China, MISC.2/Add.1);
- (d) Any funding pledged outside the UNFCCC shall not be regarded as the fulfilment of commitments by developed countries under Article 4.3 of the Convention and their commitments for measurable, reportable and verifiable financing, in terms of paragraph 1 (b) (ii) of the BAP (G77 and China, MISC.2/Add.1; China, MISC.5);
- (e) Donors do, and will continue to, provide financing for adaptation through a variety of means (Australia, MISC.2/Add.1) and the UNFCCC should facilitate and provide recognition for the results of domestic, bilateral, and multilateral activities in line with the provision of Article 11.5 (United States, MISC.1 and MISC.5). If international climate change support can be classified as ODA, then it will be reported as such, and the principles of aid effectiveness set out in the Paris Declaration on Aid Effectiveness can be expected to be applied (Australia, MISC.5/Add.2);
- (f) Bilateral, regional and multilateral channels, as referred to in Article 11.5 of the Convention, may be used to provide funding for the base cost of economic and social development (India, MISC.5/Add.1).

158. On the **mobilization of private-sector funding and investment**, Parties proposed the following principles:

- (a) The use of private funds should be maximized (Japan, MISC.2);

- (b) The private sector should be mobilized and leveraged through carbon markets and/or regulation (Argentina, New Zealand, MISC.5), provided that existing and new market mechanisms meet a high standard of environmental integrity (Canada, MISC.5/Add.2);
- (c) Private sector flows should be leveraged through public finance in order to scale up finance for mitigation and technology-related needs (EC and its member States, MISC.5/Add.1; Australia, MISC.5/Add.2);
- (d) The private sector will deliver much of the finance for technology-related needs (EC and its member States, MISC.5 and MISC.5/Add.1) and for future mitigation activities (Australia, MISC.5/Add.2);
- (e) The private-sector will cover a part of adaptation costs in several sectors, specifically in sectors with assets owned by the private sector (EC and its member States, MISC.5/Add.2).

159. On positive incentives for developing countries:

- (a) Parties proposed that positive incentives should be given to developing country Parties for enhanced implementation of national mitigation strategies and adaptation action plans (Mauritius, MISC.1; Tuvalu, MISC.1/Add.3), and resources to meet the cost of adaptation (Turkey, MISC.5);
- (b) On **incentivizing mitigation**,
 - (i) Parties noted that incentives should be provided through a variety of means at multiple levels and that the full range of public and private financial instruments should be utilized, including purpose-built funds, the financial mechanism of the Convention, ODA, and new financing options and mechanisms (Australia, MISC.2/Add.1; New Zealand, MISC.5);
 - (ii) Parties proposed that:
 - a. Market-based mechanisms have a role in mobilizing necessary financial flows (Iceland, Indonesia, MISC.1; Canada, MISC.1/Add.2; Argentina, MISC.5) including emission trading legislation, carbon taxes, policies like schemes reducing fossil fuel subsidies, energy efficiency standards, and green procurement and targeted support programmes in the form of loans or grants (EC and its member States, MISC.2);
 - b. The coverage of carbon markets should be expanded (Australia, MISC.2/Add.1; Argentina, MISC.5);
 - c. Carbon credits generated by nationally appropriate mitigation action in developing countries should be sold (Republic of Korea, MISC.2);
 - d. Carbon market (Mexico, MISC.4/Add.1; South Africa, MISC.5); tradable “emissions units” (New Zealand, MISC.4/Add.1);
 - e. Carbon markets may be able to fund incremental costs of mitigation under certain scenarios (India, MISC.5/Add.1);
 - f. A more cost-effective and flexible international carbon market is needed (Indonesia, MISC.5/Add.2);
 - g. A carbon market should be more than an offset market (Brazil, shared vision workshop);
 - h. carbon markets have the potential for, and should be key to, financing mitigation in developing countries (EC and its member States, MISC.5/Add.2);

- (vi) Market-based mechanisms as well as fund-based approaches, depending on the readiness of the country (ASEAN, MISC.5/Add.2).

161. On **generating financial resources specifically for technology cooperation**, Parties proposed that:

- (a) Funding shall come as assessed contributions from Annex II Parties as grants (Ghana, MISC.2/Add.1; G77 and China, MISC.5; South Africa, technology workshop); for example resources may be from parts of the regular fiscal budget for R&D, revenues from taxation on carbon transaction and/or auction of emission permit in carbon market, and revenues from energy or environmental taxation (China, MISC.5);
- (b) Carbon market mechanisms should be explored (Argentina, MISC.1; Ghana, MISC.2/Add.1; Iceland, MISC.5/Add.2; South Africa, technology workshop);
- (c) Innovative financing that mobilizes private-sector resources to supplement public finance sources where appropriate (AOSIS, MISC.5/Add.2);
- (d) Private-sector funding (Ghana, MISC.5; Iceland, MISC.5/Add.2), such as foreign direct investment, together with joint ventures and guarantees, should be encouraged (Bangladesh, MISC.1; South Africa, technology workshop);
- (e) Public-private partnerships are important for generating financial resources for technology development (Iceland, MISC.5/Add.2);
- (f) Funding through bilateral and regional cooperation may be considered as contribution (G77 and China, MISC.5);
- (g) Governments' investments in energy technology R&D in each country should also be evaluated as a part of overall financial contributions by developed countries, including the evaluation of the amount of fund contributions, the amount of ODA contributions, technological support, purchase of emission credits at the market, and others (Japan, MISC.5/Add.2).

162. On the **role of enabling environments in mobilizing funding and investment**, Parties noted that:

- (a) A country's enabling environment, particularly with relation to robust and transparent governance arrangements, will be a critical determinant of attracting investment flows (Australia, MISC.5/Add.2);
- (b) National policies and private-public partnerships will play a key role in attracting private investments and optimizing the use of resources (EC and its member States, MISC.5/Add.2; New Zealand, MISC.5);
- (c) There will be a central role for national government to implement regulatory and market-based incentives to attract public finance and to orient private finance (EC and its member States, MISC.5 and MISC.5/Add.1);
- (d) All Parties – developed and developing – will need to dedicate national resources to improve enabling environments, particularly in relation to robust and transparent governance arrangements (Australia, MISC.5/Add.2);
- (e) The commercial viability of investments through an appropriate climate regime should be improved (Republic of Korea, MISC.2).

163. On **guiding the disbursement of, and access to, financial resources** for mitigation and adaptation and technology cooperation, Parties proposed that:

- (a) The process of resource transfer should be based on the participation of developing countries (Argentina, MISC.1; G77 and China, MISC.2/Add.1);
- (b) All developing country Parties would be eligible for resources, with special emphasis being laid on the needs of vulnerable States and LDCs. Funds could be made available to national or subnational governments, private entities within the eligible country, or other private or national/subnational entities (India, MISC.5/Add.1);
- (c) Access should be improved (EC and its member States, MISC.2) and fast-track procedures should be developed (Bangladesh, LDCs, MISC.1) for lower management cost (China; MISC.5);
- (d) Expedited procedures for funding requests should be established to incentivize the pledging of SD-PAMs (South Africa, MISC.5);
- (e) Comprehensive incentive mechanisms should be the basis for the disbursement of funds (Turkey, MISC.5);
- (f) A shift from a project-based to a programmatic approach should be enabled (G77 and China, MISC.2/Add.1; South Africa, MISC.5), while continuing a project-based approach where needed (EC and its member States, MISC.5/Add.2);
- (g) Financial resources should be provided on a grant and concessional basis (China, MISC.5);
- (h) Funding must be provided only through new and additional grants and resource transfers (India, MISC.5/Add.1);
- (i) Prioritization of activities for funding and principles for such prioritization, should be developed (Bangladesh, MISC.1; Australia, MISC.2/Add.1);
- (j) Objective criteria, such as a small number of internationally recognized indicators representing economic status, mitigation potential, and vulnerability to climate impacts, should be developed for determining who receives broader multilateral funding (Australia, MISC.2/Add.1 and MISC.5/Add.2);
- (k) The criteria established for funding specific investments could, among other measures, include the assessment of the following:
 - (i) Conformity to a host country's national programme;
 - (ii) Contribution to the host country's sustainable development objectives;
 - (iii) Ability to fund the base costs directly or through other sources subject to the proposed financial architecture providing grants or resource transfers to fund all agreed incremental costs related to addressing climate change (India, MISC.5/Add.1);
- (l) Newly available information on financial aspects of climate mitigation and adaptation, including the AR4 of the IPCC and the 2007 UNFCCC report on investment and financial flows should be utilized (Iceland, MISC.1);
- (m) Arrangements for cooperation between national banking and financial systems and the flow of funds from the international and bilateral systems for refinancing, insurance and

other means to help funding national activities should be considered (Bangladesh, MISC.1);

- (n) The expertise of international development banks should be harnessed (Australia, MISC.2/Add.1);
- (o) Cooperation with international organizations, particularly with the multilateral development banks, should be intensified (Turkey, MISC.5);
- (p) A metric to monitor the provision of funding should be developed, and a link between funding delivered, commitments undertaken and results achieved should be established (Canada, MISC.1/Add.2);
- (q) A clear, transparent and verifiable reporting system for financial flows should be established (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5);
- (r) Developed country Parties shall report in their national communications at the defined frequency of submission, the direct financial transfers and indirect contributions through quantifiable technology and capacity-building support that they have made (South Africa, MISC.5/Add.2);
- (s) Resources should be focused on activities that determine mitigation results that are real, measurable, reportable and verifiable (Mexico, MISC.2);
- (t) Activities should have a wide scope: from single activities and projects to programmes and sub-sectors, sectoral or subnational approaches (Mexico, MISC.2).

164. **On guiding access and disbursement for adaptation:**

- (a) Funding should be provided in the form of grants rather than loans (India, MISC.5/Add.2; AOSIS, MISC.5/Add.2 and finance workshop);
- (b) Direct and simplified access should be ensured (Tuvalu, MISC.1/Add.3; India, MISC.5/Add.1; AOSIS, MISC.5/Add.2 and finance workshop), with simplified, transparent and straightforward procedures (EC and its member States, MISC.5/Add.1), as well as criteria for project selection and cost-sharing and standardized, simplified methodologies (India, adaptation workshop);
- (c) Programmatic approaches should be supported and support should be channelled to the appropriate level to facilitate implementation (EC and its member States, MISC.2 and MISC.5/Add.1);
- (d) Effective donor collaboration and coordination should be taken into account and the principles on aid effectiveness set out in the Paris Declaration on Aid Effectiveness and the Accra High Level Forum on Aid Effectiveness should be applied (EC and its member States, MISC.2 and MISC.5/Add.1; Australia, MISC.2/Add.1; New Zealand, MISC.5);
- (e) The commitments under the Convention to fund the incremental costs of addressing climate change should not be treated as aid or assistance under a donor-recipient platform (India, MISC.5/Add.1);
- (f) The Paris Declaration on Aid Effectiveness is not relevant to the Convention process, as financing for addressing climate change is a separate obligation from ODA, and the Paris Declaration principles do not apply, therefore, in the climate change context (AOSIS, MISC.5/Add.2);

- (g) The absorptive capacity of individual recipient countries should not be exceeded (Australia, MISC.2/Add.1; United States, MISC.5);
- (h) Information on accessing funds, such as eligibility criteria, procedures and pledges, should be disseminated (Singapore, MISC.2);
- (i) Consolidated and streamlined information on available sources of funding for adaptation should be provided by the UNFCCC secretariat, building upon survey data provided by the OECD (Australia, MISC.2/Add.1);
- (j) The impact on the adaptive capacity of the recipient country should be taken into account (India, MISC.5/Add.2).

165. On **access and disbursement of funds for mitigation, including REDD**, Parties proposed the following:

- (a) All countries are eligible, but developed countries may access resources only up to a fraction of their contributions, and any single developing country only up to a certain ceiling (Mexico, MISC.2);
- (b) To distinguish financing for nationally appropriate mitigation actions in developing countries:
 - (i) Some support for addressing barriers to implementation of nationally appropriate actions can be implemented unilaterally by the country itself;
 - (ii) More financing can be provided by donor countries for additional nationally appropriate actions that are expected to lead to an appropriate deviation from the recipient country's emission baseline by 2020;
 - (iii) International carbon crediting mechanisms to support mitigation actions beyond category (i) and (ii) (EC and its member States, MISC.5/Add.1);
- (c) Developing countries' access to support should be based on such criteria as:
 - (i) Economic development stage, capacity to respond for their nationally appropriate mitigation actions (e.g. GDP per capita) and emission share in the world (Japan, MISC.2);
 - (ii) National circumstances and capability (Norway, MISC.5);
- (d) Countries with tropical forest, who are willing and able to reduce emissions from deforestation and degradation or to conserve or enhance their forest carbon stocks, should be given funds (Norway, MISC.5);
- (e) Participating countries are entitled to financial incentives after they demonstrate, in a transparent and credible manner, a net reduction in their emissions from deforestation (Brazil, MISC.5);
- (f) Mitigation beyond business as usual and emissions mitigated per unit of investment (India, MISC.5/Add.1).

166. On **priority access to funds for adaptation**, Parties proposed that:

- (a) Funding should be provided as a priority to particularly vulnerable developing countries, especially to:

- (i) LDCs and SIDS (Japan, Singapore, MISC.2; AOSIS, MISC.2/Add.1 and MISC.5/Add.2; LDCs, adaptation workshop), in particular in the Pacific (Australia, MISC.2/Add.1);
 - (ii) Low-lying island and coastal developing countries (Mauritius, MISC.1), as well as countries in Africa (LDCs, MISC.1);
- (b) Priority should be give to funding the poorest and most vulnerable countries (EC and its member States, MISC.2; United States, MISC.5; Canada, MISC.5/Add.2) and those most in need (Indonesia, Mauritius, MISC.1; Australia, African Group, MISC.2/Add.1; Argentina, Brazil, MISC.5; China, India, adaptation workshop).
167. On **access and disbursement of funds for technology cooperation**, Parties noted that:
- (a) Procedures to use funds for technology transfer should enable easy access by all developing countries regardless of their status in the Annexes to the Convention (Turkey, MISC.5), including direct access (Ghana, MISC.2/Add.1);
 - (b) Allocations of funds for technology cooperation should be based on:
 - (i) Incremental cost of R&D of clean energy or low-carbon technologies;
 - (ii) Incremental costs resulting from deployment and diffusion of commercially available low-carbon technologies;
 - (iii) Full cost of technology patents and licence fees for IPRs covering low-carbon technologies (India, MISC 5/Add.1; AOSIS, MISC.5/Add.2).
168. On **disbursing funds for mitigation, including REDD**, Parties proposed that:
- (a) Public financial support for mitigation should be prioritized towards investment relating to gaps in the carbon market and private sector investment (Australia, MISC.2/Add.1);
 - (b) Financial resources should precede the implementation of REDD activities (Argentina, MISC.5);
 - (c) The relative cost-effectiveness of financial assistance should be considered (Australia, MISC.2/Add.1).
169. On the **disbursement of funds for adaptation**, Parties proposed the following:
- (a) On **criteria for disbursing funds for adaptation**:
 - (i) Funding should be distinguished and balanced between adaptation programmes that are integrated with development planning and those that are stand-alone (African Group, MISC.2/Add.1);
 - (ii) Funding should address the additional burden of climate change imposed on developing countries (India, adaptation workshop);
 - (iii) Allocation of funds must redress the historical inequity (African Group, MISC.2/Add.1);
 - (iv) Funding should be managed as per internationally accepted standards for public financial management (EC and its member States, MISC.5/Add.2);
 - (b) **Allocations of funds for adaptation** should be based on:

- (i) Negotiated levels for co-financing, cost-sharing and additional cost by sector and type of investment, following an approach of determination that is simple, avoids project-by-project calculations to the extent possible, and is flexible and comprehensive (India, MISC.5/Add.1);
- (ii) Vulnerability indicators/index reflecting a country's circumstances, respective capabilities, level of associated risk, physical impacts (Australia, MISC.2/Add.1; Turkey, MISC.5; LDCs, adaptation workshop), capacity to adapt, and contribution to climate change (AOSIS, MISC.5/Add.2), but not whether the country is a Party to the KP (Turkey, MISC.5),

170. On other activities to be supported through the provision of financial resources and investment, Parties proposed:

- (a) Funding the agreed full incremental costs for the implementation of developing countries' actions under Article 4.1, and agreed full costs for the preparation of national communications and the implementation of action programmes developed under the Convention (G77 and China, MISC.2/Add.1; India, MISC.5/Add.1);
- (b) Funding the agreed full cost for the preparation of national action plans and for their implementation (India, MISC 5/Add.1);
- (c) Funding for national climate focal points (Micronesia (Federated States of), MISC.1);
- (d) Funding for national capacity self-assessment and capacity-building (Maldives, MISC.1) and institutional frameworks (India, MISC.5/Add.1);
- (e) Generic guidelines for financial needs assessment for addressing mitigation and adaptation needs (Bangladesh, MISC.1);
- (f) Compensation for restricted development opportunities and for adaptation impacts (Pakistan, MISC.5/Add.2).

2. Input from observer organizations

171. On principles for the provision of new and additional resources, observer organizations noted that funding should be:

- (a) Scaled up dramatically and be adequate, predictable, sustainable, measurable, reportable, verifiable, and new and additional to ODA commitments of 0.7 per cent of GNI (South Centre, MISC.3/Add.1; UNDP, MISC.6; CAN, ForUM, ITUC, Oxfam, TWN);
- (b) Based on non-discrimination, transparency and cost-relatedness in any measure contemplated, as well as the impact on all parties concerned, in particular the developing countries (ICAO, MISC.6/Add.2);
- (c) Raised according to common but differentiated responsibilities, respective responsibilities for cumulative, historical GHG emissions and respective capabilities of countries (CAN, MCII, Oxfam);
- (d) Counted towards Parties' determined shares only if the financial contributions either occur through mechanisms of the post-2012 architecture (TWN) or follow criteria and guidelines set by the COP (CAN).

172. On provision of new and additional resources, observer organizations noted that:

- (a) Public funding is critical for mobilizing the necessary resources for mitigation, REDD and adaptation (ITUC);

- (b) Public funding is critical and needed to leverage much greater amounts of private financing (CAN; UNEP, MISC.6/Add.2);
- (c) Public funding should be considered to facilitate the removal of impediments to technology transfer (ITUC) and for adaptation (Keidanren);
- (d) General resources should be raised through:
 - (i) Periodic mandatory contributions from developed country Parties, consistent with the provisions of Article 4.3 (South Centre, MISC.3/Add.1), for example according to the ratio of their United Nations contributions (TWN);
 - (ii) A fair and redistributive tax system (ITUC);
 - (iii) Bilateral (including developed country Parties' ODA), regional and multilateral funding (South Centre, MISC.3/Add.1; UNEP, MISC.6/Add.2; TNC, TWN) and innovative funding mechanisms such as the G8 Clean Technology Fund (ICC);
 - (iv) Voluntary contributions from other Parties as well as other intergovernmental and non-governmental institutions (South Centre, MISC.3/Add.1);
 - (v) Income earned from investments made by a trustee institution (South Centre, MISC.3/Add.1);
 - (vi) Funding from market-based activities or mechanisms (South Centre, MISC.3/Add.1; ICC, TNC), including auctioning of some portion of AAUs (CAN, Oxfam, TWN); and auctioning of allowances or application of levies in international aviation and maritime transport (CAN, Oxfam);
 - (vii) Contributions by companies, banks (TNC) and other private institutions (TWN);
- (e) Resources for mitigation, including REDD, should be provided through carbon and non-carbon market mechanisms, i.e. funds (CAN);
- (f) The total amount of the funds should not be fixed but should be determined by a regular, independent assessment of the funding required (South Centre, MISC.3/Add.1; TWN).

173. On the disbursement of, and access to, financial resources and investment, observer organizations noted that:

- (a) Funding should be provided to developing country Parties for the agreed full costs of preparing national communications, the agreed full incremental costs of implementing measures under Article 4.1 of the Convention, the costs of adaptation, the costs for REDD, the costs for transfer of, or access to, environmentally sound technologies and know-how and the costs for the implementation of the capacity-building frameworks (South Centre, MISC.3/Add.1; CAN, TWN);
- (b) Funding should be in the form of grants (Oxfam), with no or minimal levels of concessional loans (South Centre, MISC.3/Add.1);
- (c) No co-financing should be formally required, no conditionalities should be imposed and flexibility should be ensured through direct access and simple, clear streamlined procedures (TWN);
- (d) Funding for REDD should be:
 - (i) Provided through the carbon market and/or an international fund (WHRC/IPAM);

- (ii) In the form of a REDD mechanism with a variety of mutually reinforcing financing options, including direct incentives, ODA, carbon markets, multilateral donor funds and other potential revenue sources (TNC);
 - (iii) A fund-based approach, to guarantee substantial, sustainable and predictable long-term financial flows. Markets are inherently volatile (Global Witness);
 - (iv) Distributed as bonus payments for avoiding physical depreciation of stocks and as dividends for carbon stocks (WHRC/IPAM);
 - (v) Transparent, open for public scrutiny and monitored by independent third parties, at both the global and national levels (ForUM);
 - (vi) Tied to strong requirements for good governance, the United Nations Declaration on the Rights of Indigenous Peoples and avoidance or minimization of international emissions displacement (CAN).
- (e) Funding for adaptation should be:
- (i) Delivered to the most vulnerable communities, households and countries (in particular LDCs, SIDS and drought- and flood-prone areas in Africa) (CAN);
 - (ii) Allocated on a strategic basis and not involving international micro-management at the project level (MCII);
 - (iii) Allocated and structured according to the Hyogo Framework's priorities for action (ISDR, MISC.6; Tearfund).

B. Means to incentivize adaptation actions and innovating means to fund developing country Parties for meeting the cost of adaptation, including technical support for capacity-building in assessment of adaptation costs

1. Input from Parties

174. On **financing for adaptation**, Parties noted that it should be **differentiated from financing for mitigation**, as:

- (a) Financing for mitigation is more readily available, easier to access and more attractive for private investment than financing for adaptation, which relies more on the public sector (AOSIS, technology workshop);
- (b) The funding obligation in the Convention with respect to adaptation is different from that for mitigation; under Article 4.4 of the Convention, the obligation is to "assist" developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects (United States, MISC.5).

175. On **innovative means of funding to assist developing country Parties in meeting the cost adaptation**, Parties proposed that funding be scaled-up (Singapore, MISC.2; Australia, Mongolia, MISC.2/Add.1; Argentina, MISC.5), by two or three orders of magnitude (African Group, MISC.2/Add.1), and be generated urgently (Pakistan, MISC.1/Add.1; Argentina, MISC.5).

176. On **funding**, Parties proposed that funding should be raised through:

- (a) Mandatory or assessed contributions from developed countries (China, MISC.5; AOSIS, LDCs, finance and shared vision workshops);

- (b) Auctioning directly or applying a tax on the issuance of allowances, i.e. AAUs at the international level (Norway, MISC.2; AOSIS, MISC.2/Add.1 and MISC.5/Add.2);
- (c) The share of proceeds from joint implementation and emissions trading (Colombia, MISC.1; India, MISC.5/Add.1; China, adaptation workshop and FCCC/AWGLCA/2008/11; LDCs, finance and shared vision workshops);
- (d) Existing mechanisms such as the CDM levy (EC and its member States, MISC.2) expanded to a level of 3–5 per cent of CERs (Pakistan, MISC.1/Add.1);
- (e) Levies on international air travel and maritime bunker fuels (AOSIS, MISC.5/Add.2; LDCs, finance and shared vision workshops), and levies from the resources of a World Climate Change Fund (Mexico, MISC.2);
- (f) Venture capital (LDCs, finance workshop);
- (g) A diversity of sources, including ODA and the private sector (United States, MISC.5);
- (h) Various sources, including the private sector, the carbon market, the public sector and innovative instruments at both national and international levels (EC and its member States, MISC.5/Add.2);
- (i) Voluntary contributions from developed and developing countries and philanthropic organizations over and above assessed contributions (AOSIS, MISC.5/Add.2);
- (j) An institutionalized structure and process to identify and fund the most urgent and immediate adaptation needs of SIDS and LDCs and a mechanism for delivering resources and technical support (AOSIS, MISC.2/Add.1).

177. On **means to incentivize adaptation actions on the basis of sustainable development** (for specific institutional arrangements to provide incentives see chapter VI C), Parties proposed:

- (a) The provision of resources to meet the cost of adaptation (Turkey, MISC.5);
- (b) The provision of support to fund financial resilience to the impacts of extreme weather events and catastrophes, collective loss sharing, and compensation of climate victims (AOSIS, MISC.2/Add.1; Sri Lanka, Switzerland, MISC.5; AOSIS, LDCs, adaptation workshop).

2. Input from observer organizations

178. Organizations proposed that innovative means of funding should be:

- (a) Raised through auctioning of some portion of AAUs and of allowances/levies in international aviation and maritime transportation, international aviation passenger levy and extension of the share of proceeds to JI and emissions trading (CAN);
- (b) Linked to the level and scale of emission reductions. Failure to fulfil mitigation targets results in additional adaptation funding burdens (CAN).

179. Means to incentivize the implementation of adaptation actions should include:

- (a) An insurance module as part of a multi-pillar adaptation fund with a prevention and an insurance pillar consisting of an insurance pool and an insurance assistance facility (MCID);
- (b) An international insurance mechanism (CAN);

- (c) Risk financing instruments at all levels to reduce financial impacts and shocks and to promote risk-reducing action (ISDR, MISC.6).

C. Institutional arrangements for the provision of financial resources and investments

180. Parties and observer organization, through their submissions, have elaborated concrete ideas and proposals on institutional arrangements for the provision of financial resources and investment, including ideas and proposals on the overall institutional framework, governance issues, and existing and new funds. They responded to a call for enhanced action on several elements of paragraph 1, especially paragraph 1 (e), of the BAP. Those ideas and proposals have been assembled in line with the importance with which Parties and observer organizations put them forward in their submissions and workshop presentations.

1. Input from Parties

181. On the **overall institutional framework under the Convention**, Parties noted that:

- (a) The goal is to bring about coherence in the global financial architecture for financing under the authority and governance of the COP (India, MISC.5/Add.1). The financial mechanism would facilitate links between the various funding sources and separate funds in order to promote access to the variety of available funding sources and reduce fragmentation (G77 and China, MISC.2/Add.1; China, MISC.5);
- (b) The Convention should be utilized as a fulcrum to ensure coherence and coordination at the international level among all actors (AOSIS, MISC.5/Add.2 and finance workshop);
- (c) Funding for adaptation should be structured and governed under an umbrella financial mechanism of the UNFCCC, with an emphasis on transparency, efficiency, and equity. Financial mechanisms and instruments for adaptation created outside the Convention should coordinate with the mechanism developed under the Convention (Argentina, MISC.1 and MISC.5);
- (d) The financial architecture should be coherent, consistent, effective, efficient and equitable, and ensure strong synergy between activities in the UNFCCC and related national and international policies and efforts (EC and its member States, MISC.2 and MISC.5/Add.1);
- (e) Funding mechanisms to assist developing countries should be informed by and modelled after the Montreal Protocol's Multilateral Fund mechanism (Micronesia (Federated States of), MISC.1).

182. On the **governance of financial resources**, Parties noted that:

- (a) The COP is the supreme decision-making body of the Convention, under whose authority and guidance the financial mechanism will operate and new funds with specific purposes will be established (G77 and China, MISC.2/Add.1; China, MISC.5);
- (b) Any new financing should be channelled through the Convention and any new fund(s) for addressing climate change should be under the guidance and supreme authority of the COP (AOSIS, MISC.5/Add.2 and finance workshop; LDCs, shared vision workshop);
- (c) Any new financial architecture should ensure full transparency, openness and global representation by all Parties as well as mutual accountability. The COP should give its view on progress and results achieved (EC and its member states, MISC.5/Add.2);

- (d) The support for mitigation and adaptation may be provided and accessed through bilateral, regional and other multilateral channels and shall not be governed solely by the decisions and priorities of the COP (Australia, MISC.5/Add.1).

183. On **existing and potential new institutional arrangements**, Parties proposed:

- (a) Making use of existing institutions such as the AF of the KP (Mongolia, MISC.2/Add.1) and the Global Environment Facility in order to avoid a proliferation of institutions (Switzerland, MISC.5);
- (b) Improving and optimizing existing international financial mechanisms, funds and institutions (EC and its member States, MISC.2; Japan, MISC.5; Canada, MISC.5/Add.2) and reinforcing their coordination (EC and its member States, MISC.5/Add.2);
- (c) Avoiding unnecessarily creating new funds, mechanisms or institutions (United States, MISC.5). Problems with existing mechanisms should be addressed prior to consideration of additional avenues (New Zealand, MISC.5) and where possible, existing international financial organizations should be used and their lending policies tailored to meet the specific requirements of climate change in developing countries (Singapore, MISC.2).

184. On **financial mechanism under the Convention**, Parties proposed operationalizing an effective financial mechanism under the COP (G77 and China, MISC.2/Add.1; India, MISC.5/Add.1) with the following elements:

- (a) A Board appointed by the COP, with an equitable and balanced representation of all Parties within a transparent and efficient system of governance. It will be assisted by a secretariat of professional staff contracted by the Board;
- (b) Specialized funds, funding windows and a mechanism to link various funds under the governance of the COP and the Board;
- (c) A trustee or trustees to administer the funds selected through a process of open bidding;
- (d) An expert group or committee, advising each of the separate funds. The group or committee could also be supported by a technical panel or panels addressing specific issues addressed by the fund;
- (e) A possible consultative/advisory group of all relevant stakeholders and an independent assessment panel to ensure transparent and efficient governance;
- (f) New modalities for the determination of the role of existing funds and entities for the operation of the financial mechanism.

185. On **general institutional arrangements** to support action on mitigation, adaptation and technology cooperation, Parties proposed the establishment of:

- (a) A world climate change fund (Green Fund) as a financial scheme that complements existing mechanisms (Mexico, MISC.2), with the following elements:
 - (i) Operation under the aegis of the COP, including annually reporting;
 - (ii) An Executive Council, constituted by representatives of all participant countries, to operate the Green Fund, in which developing countries will have the same relative weight and voice as developed countries;
 - (iii) Three independent counsellors to the Executive Council:
 - a. A scientific counsellor;
 - b. A counsellor from the multilateral development banks; and
 - c. A counsellor from social organizations;

- (iv) Two support committees to the Executive Council:
 - a. Scientific Committee, to be established in consultation with the IPCC to issue recommendations about policies, strategies and programmes that the Fund can support;
 - b. Multilateral Banks Committee to issue recommendations in its field of competence;
- (v) Administration of the Green Fund by an existing multilateral institution, chosen by the COP;
- (b) National climate change funds fed with a portion of revenues generated through a uniform global levy on CO₂ in each country, to finance national climate change policies according to the country's specific needs and legal framework covering adaptation, technology transfer or mitigation measures (Switzerland, MISC.5).

186. On **specific institutional arrangements to support mitigation, including REDD** (see also chapter III C), Parties proposed:

- (a) A mitigation fund to operate under the COP as part of the enhanced multilateral financial mechanism described in the relevant G77 and China proposal (see also para. 184 above) (China, MISC.5);
- (b) A multilateral channel with simple of procedures, transparency in resource allocation and management and fair distribution of resources (Indonesia, forest workshop);
- (c) A REDD mechanism with a robust, effective and sustainable system for mobilizing financial resources (Norway, MISC.5);
- (d) A performance-based mechanism for the distribution of financial incentives provided by Annex II countries to developing countries that demonstrate, voluntarily, in a transparent and credible manner, a net reduction in their emissions from deforestation, supported by a focal point in the UNFCCC secretariat (Brazil, MISC.5, with reference to FCCC/SBSTA/2007/MISC.2);
- (e) An international REDD Fund (Tuvalu, forest workshop) with following governing structure:
 - (i) A Board of UNFCCC Parties regionally represented;
 - (ii) An advisory Panel;
 - (iii) A secretariat (UNFCCC secretariat);
- (f) A REDD mechanism with two tracks (Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama, MISC.5) with the following elements:
 - (i) Track 1 to serve as a new flexible mechanism to help developed countries achieve higher reduction emissions target;
 - (ii) Track 2 to serve as a mitigation option for developing countries and to be financed through funds, to allow inclusion of a broad range of LULUCF activities besides REDD such as conservation;
- (g) A national-based REDD mechanism, either market or funds based, to provide the primary financial resources to address REDD and a funds-based approach for initial projects (New Zealand, MISC.4/Add.1), with the following elements:
 - (i) Maximum potential for global coverage;

- (ii) No application of arbitrary adjustments to financial incentives to 'correct' for possible inter-country leakage;
- (iii) An output management scheme that is funding based on actual reductions in emissions to achieve the substantial resource flows required.

187. On specific **institutional arrangements to support adaptation** (see also chapter IV), Parties proposed:

- (a) A fund sourced from the auctioning of AAUs at the international level by an appropriate international institution such as a reputable international bank (Norway, MISC.2 and finance workshop);
- (b) An adaptation fund under the Convention (China, MISC.5; AOSIS, MISC.2/Add.1, MISC.5/Add.2 and finance workshop) with the following elements:
 - (i) The fund should be under the guidance and supreme authority of the COP;
 - (ii) It should be complementary to, not replacing the AF under the KP;
- (c) A global Multilateral adaptation fund fed with a share of revenues generated through a uniform global levy on CO₂ and differentiated according to groups of countries formed on the basis of per capita GDP (Switzerland, MISC.5) with the following elements:
 - (i) Prevention Pillar, for climate change impact (risk) reduction through appropriate policies and measures; and
 - (ii) Insurance Pillar for climate impact response: relief, rehabilitation, recovery;
- (d) A new mechanism for adaptation with the following elements (India, MISC 5/Add.1):
 - (i) An executive board accountable to the COP with balanced representation from Annex-I and non Annex-I Parties;
 - (ii) An advisory board;
 - (iii) A secretariat;
 - (iv) A trustee;
- (e) An appropriate financial mechanism for meeting adaptation needs, taking into consideration the vulnerability scale for adaptation (Maldives, MISC.1);
- (f) A multi-window mechanism with insurance, rehabilitation/compensatory and risk management components to address loss and damage from climate change, with the following elements (AOSIS, MISC.5/Add.2):
 - (i) The multi-window mechanism;
 - (ii) A multi-window mechanism board;
 - (iii) A technical advisory facility and a financial vehicle/facility;
 - (iv) Administrative support provided by the UNFCCC Secretariat;
- (g) Solidarity funds/insurance mechanisms to promote financial resilience to extreme weather events, catastrophic risk, collective loss sharing and compensation of climate victims (AOSIS, MISC.2/Add.1; Argentina, Sri Lanka, MISC.5; LDCs, finance

workshop) and climate refugees; this should include the use of micro-insurance (Bangladesh, FCCC/AWGLCA/2008/11);

- (h) A permanent adaptation committee, as an adaptation support mechanism to assist in strategic planning, as well as the development of policy and legal frameworks to enable climate-resistant development (AOSIS, MISC.5/Add.2);
- (i) A framework on action for adaptation to serve as a guide for the financial mechanism operating within the context of the UNFCCC, and to be considered by multilateral and bilateral organizations in their adaptation and resilience-building activities (EC and its member States, MISC.2, MISC.5/Add.1 and FCCC/AWGLCA/2008/11);
- (j) No additional fund or intergovernmental insurance mechanisms (United States, MISC.5).

188. On **specific institutional arrangements to support technology cooperation** (see also chapter V), Parties proposed:

- (a) A multilateral climate technology fund (MCTF) (Ghana, MISC.2/Add.1 and FCCC/AWGLCA/2008/11; G77 and China, Turkey, MISC.5; G77 and China, shared vision workshop) to operate under the COP as part of the enhanced multilateral financial mechanism described in the relevant G77 and China proposal (see also para. 184 above), with the following elements:
 - (i) A technology development and transfer board responsible for the supervision and management of the MCTF, and fully accountable to the COP;
 - (ii) A trustee or trustees, selected through a process of open bidding, who shall have fiduciary responsibility and administrative competence to manage the MCTF, and shall hold in trust the funds, assets, and receipts that constitute the fund, and shall comply with the principles and modalities for their management and disbursement as stipulated by the COP;
- (b) A financial mechanism supporting development, transfer and deployment of ESTs aimed at developing public-private partnership (China, MISC.5 and FCCC/AWGLCA/2008/11), with the following elements:
 - (i) A multilateral technology acquisition fund sourced mainly from public finance from developed countries, the regular fiscal budget for R&D, fiscal revenues from taxation on carbon transaction and/or auction of emission permits in the carbon market, as well as fiscal revenues from energy or environmental taxation;
 - (ii) An international mechanism for cooperation on the R&D and transfer of technologies, inter alia, for the establishment of a financial mechanism for the R&D and transfer of technologies;
- (c) A technology mechanism under the authority and guidance of the COP (India, MISC.5/Add.1) with the following elements:
 - (i) An Executive Body on Technology established as a subsidiary body of the Convention, comprising:
 - a. A strategic planning committee;
 - b. Technical panels;
 - c. A verification group;
 - d. A secretariat;
 - (ii) A multilateral climate technology fund to meet technology-related financial requirements as determined by the Executive Body;

- (d) A multilateral funding mechanism to be operated under the Convention to support the dissemination of existing technologies (including patent expired), capacity-building and disseminate know-how (adapt, use and develop technologies), experience and equipments for mitigating and adapting to climate change, and purchase licenses for patented technologies (Brazil, MISC.5 and technology workshop);
- (e) A world climate change fund, including a clean technology fund to support project preparation and transfer and development, demonstration and dissemination of technologies (Mexico, MISC.2 and FCCC/AWGLCA/2008/11);
- (f) Functional financing windows to address specific requirements such as a technology acquisition and technology transfer fund for available climate-friendly technologies, a venture capital fund for emerging climate technologies and a collaborative climate research fund (India, MISC.5/Add.1);
- (g) An international fund to fast-track development of renewable energy technologies (AOSIS, MISC.5/Add.2 and technology workshop);
- (h) A framework that incentivizes investments in climate-friendly technologies (Norway, MISC.5);
- (i) An enhanced framework on technology for mitigation and adaptation (EC and its member States, MISC.5/Add.1);
- (j) Discussing a desirable form of funds that can be used to accelerate technology transfer, including utilization of programmes such as the Clean Technology Fund of the World Bank (Japan, MISC.5/Add.2);
- (k) A technology transfer mechanism to provide incentives through concessionary loans, export loans or tax incentives to attract investment in technology development and transfer (Turkey, MISC.5/Add.2).

2. Input from observer organizations

189. On existing institutional arrangements to support mitigation, adaptation and technology cooperation, observer organizations noted that:

- (a) The AF under the KP should be the central element of the adaptation funding regime with its governance structure serving as a model (CAN);
- (b) Existing coordinating mechanisms may be further enhanced to support integrated delivery (UNDP, MISC.6);
- (c) Existing funding mechanisms for risk reduction should be strengthened and consideration of changes in risks should be incorporated in emergency-related funding mechanisms (ISDR, MISC.6);

190. On new institutional arrangements to support mitigation, adaptation and technology cooperation, observer organizations proposed the establishment of:

- (a) A climate change fund (CCF) (South Centre, MISC.3/Add.1) or Multilateral Financial Structure (MFS) (TWN) that functions under the guidance of and is accountable to the COP and is flexible and non-restrictive with respect to the sources of funds and the use thereof, with the following elements:
 - (i) A Board with an equitable and balanced representation of Parties, supported by a secretariat, to manage the fund and report to the COP;

- (ii) A trustee institution selected by open and competitive international bidding and supervised by and accountable to the Board;
 - (iii) Expert groups and a technical assistance programme for the MFS;
 - (iv) Regular reviews of the institutional arrangements for the CCF secretariat and trustee as part of the reviews of the financial mechanism under Article 11.4 of the Convention for the CCF;
- (b) An insurance module as part of a multi-pillar AF with a prevention and an insurance pillar consisting of an insurance pool and an insurance assistance facility (MCII);
 - (c) An international insurance mechanism (CAN);
 - (d) Risk financing instruments at all levels to reduce financial impacts and shocks and to promote risk-reducing action (ISDR, MISC.6);
 - (e) A REDD mechanism, which should be a stand-alone agreement not linked to the KP and should contain obligations that bind Annex I Parties as well as developing countries (Global Witness);
 - (f) A fund-based mechanism to support countries in the design and implementation of the legal, institutional and governance reforms needed to address REDD (FERN/FOEI/RFUK);
 - (g) A hybrid, market-linked tropical deforestation emission reduction mechanism under the UNFCCC and the KP (Greenpeace);
 - (h) A technology fund based on public finance to support the development and transfer of technologies (TWN);
 - (i) A world climate change fund that encompasses funds from different sources and finances adaptation and mitigation actions (ITUC);
 - (j) A multilateral funding mechanism for funding technology development and diffusion, including existing and near-market solutions, and to provide capacity-building support (WWF);
 - (k) Various initiatives, undertaken by bilateral or multilateral agencies, aimed at developing markets for cleaner energy technologies in developing countries including financial innovation, risk mitigation, small and medium-sized enterprise, finance, LDC credit, end-user finance, and carbon finance facilities (UNEP, MISC.6/Add.2);
 - (l) New mechanisms, such as country-level trust funds for channelling bilateral and multilateral donor funding or a global United Nations system-wide multi-donor trust fund (UNDP, MISC.6);
 - (m) A coherent architecture for international climate financing that respects the political guidance provided through the UNFCCC process, but allows different institutions and funding mechanisms inside and outside the United Nations system to draw on their respective strengths (TNC);
 - (n) Coordination and synergy between the specific financing mechanisms for adaptation under the Convention, and other mechanisms and processes both inside and outside the climate regime (CAN) (see also chapter IV).

Annex**List of abbreviations**

AAU	Assigned amount unit
AF	Adaptation Fund
AOSIS	Alliance of Small Island States
AR4	Fourth Assessment Report of the IPCC
ASEAN	Association of Southeast Asian Nations
AWG-KP	Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol
AWG-LCA	Ad Hoc Working Group on Long-Term Cooperative Action under the Convention
BAP	Bali Action Plan (decision 1/CP.13)
BftW	Bread for the World
CAN	Climate Action Network International
CATF	Clean Air Task Force
CARE	Care International
CBD	Convention on Biological Diversity
CCF	Climate Change Fund
CCS	Carbon dioxide capture and storage
CDM	Clean development mechanism
CER	Certified emission reductions
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO ₂	Carbon dioxide
COP	Conference of the Parties
CSEND	Centre for Socio-Eco-Nomic Development
EC	European Community
ECOSOC	Economic and Social Council
ED	Environmental Defense
EIA	Environmental Investigation Agency
EIG	Environmental Integrity Group
EST	Environmentally sound technologies
ETS	Emission trading scheme
FAO	Food and Agriculture Organization of the United Nations
FCPF	World Bank Forest Carbon Partnership Facility
FERN	Forests and the European Union Resource Network
FOEI	Friends of the Earth International
ForUM	Norwegian Forum for Environment and Development
G77	The Group of 77
GCOS	Global Climate Observing System
GDP	Gross domestic product
GEF	Global Environment Facility
GGCA	Global Gender and Climate Alliance
GHG	Greenhouse gas
GLOBE	Global Legislators for a Balanced Environment
GNI	Gross national income
GNP	Gross national product
GW	Global Witness
HSI	Humane Society International
IAEA	International Atomic Energy Agency
IASC	Inter-Agency Standing Committee

ICAO	International Civil Aviation Organization
ICC	International Chamber for Commerce
IEA	International Energy Agency
IETA	International Emission Trading Association
IFAD	International Fund for Agricultural Development
IFAP	International Federation of Agricultural Producers
IFI	International Financial Institutions
IGO	Intergovernmental organization
ILO	International Labour Organization
IMO	International Maritime Organization
IPAM	Amazon Institute for Environmental Research
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual property rights
ISDR	United Nations International Strategy for Disaster Reduction
ITUC	International Trade Union Confederation
IUNC	International Union for the Conservation of Nature
JI	Joint implementation
KP	Kyoto Protocol
LDCs	Least developed countries
LULUCF	Land use, land-use change and forestry
MCII	Munich Climate Insurance Initiative
MCTF	Multilateral Climate Technology Fund
MFS	Multilateral financial structure
NAMAs	Nationally appropriate mitigation actions
NAPA	National adaptation programme of action
NGO	Non-governmental organization
OCHA	Office for the Coordination of Humanitarian Affairs
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
QELROs	Quantified emission limitation and reduction commitments
R&D	Research and development
REDD	Reducing emissions from deforestation and forest degradation in developing countries
RFUK	United Kingdom Rainforest Foundation
SD-PAMs	Sustainable development policies and measures
SIDS	Small island developing States
TNC	The Nature Conservancy
TRIPS	Trade-related aspects of intellectual property rights
TWN	Third World Network
TWS	The Wilderness Society
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
UNU	United Nations University
UNWTO	United Nations World Tourism Organization
WEDO	Women's Environment and Development Organization
WMO	World Meteorological Organization
WHRC	Woods Hole Research Center
Wetlands Int.	Wetlands International
WWF	World Wide Fund for Nature
