



**AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION
UNDER THE CONVENTION**

Third session

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Item 3 (a–e) of the provisional agenda

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

**Summary of views expressed during the second session of the Ad Hoc
Working Group on Long-term Cooperative Action under the Convention**

Note by the Chair*

Summary

The second session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) was held in Bonn, Germany, from 2 to 12 June 2008. At that session, Parties considered all the elements of decision 1/CP.13 (the Bali Action Plan): a shared vision for long-term cooperative action; enhanced national/international action on mitigation; 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. The AWG-LCA invited the Chair to prepare a summary of the views expressed in that session.

* This document was submitted after the due date because there was insufficient time to finalize it.

CONTENTS

	<i>Paragraphs</i>	<i>Page</i>
I. INTRODUCTION.....	1–4	3
A. Mandate.....	1–2	3
B. Scope of the note.....	3–4	3
II. CHAIR’S SUMMARY	5–64	3
A. A shared vision for long-term cooperative action.....	5–12	3
B. Enhanced national/international action on mitigation	13–26	4
C. Enhanced action on adaptation	27–44	6
D. Enhanced action on technology development and transfer to support action on mitigation and adaptation.....	45–53	9
E. Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation	54–63	12
F. Next steps.....	64	14

I. Introduction

A. Mandate

1. The second session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) was held in Bonn, Germany, from 2 to 12 June 2008. During that session, Parties exchanged views, seeking progress on all the elements assigned to the AWG-LCA by decision 1/CP.13 (the Bali Action Plan).¹

2. The AWG-LCA, at its first session, invited its Chair to prepare a summary of the views expressed at each session. It also requested the Chair to include in that summary the views expressed at the workshops held as part of its work programme.²

B. Scope of the note

3. The second session of the AWG-LCA covered the five elements contained in paragraph 1 of the Bali Action Plan.³ This summary builds on the exchange of views at the first session⁴ and focuses on progress made in the consideration of the Bali Action Plan. To the extent possible, it also highlights ideas and proposals presented by Parties, identifying them with the title with which Parties referred to them during the session. In order to facilitate such identification and to the extent possible, reference to a proposing Party has been added.

4. As with the summary of the first session, this document is organized in five sections to reflect the exchange of views on each of the elements of the Bali Action Plan. Considerations by Parties, and this summary, also reflect the interlinkages among these elements.

II. Chair's summary

A. A shared vision for long-term cooperative action

5. Parties considered the shared vision for long-term cooperative action, building on the initial substantive exchange on this element at the first session of the AWG-LCA.⁵ Parties expressed their views in relation to **the scope and nature of the shared vision**, emphasizing that it encompasses all the elements of the Bali Action Plan. Particular attention was given to the **cooperative aspect** of the shared vision and the need to consider ways and means for enhanced cooperation in order to achieve the objective of the Convention.

6. Some Parties argued that the shared vision for long-term cooperative action should balance the elements of the Bali Action Plan and guide its implementation, whereas other Parties felt that a shared vision should be the result of an aggregation of the actions undertaken under the Bali Action Plan.

7. Parties noted that a shared vision should aim beyond stabilization of greenhouse gas concentrations in the atmosphere to include the comprehensive objective of the Convention and its principles, in order to enable **sustainable and climate-resilient development**. Parties also noted that this element has to be translated into concrete actions in order to put the world on the pathway towards a low-carbon economy. Views were expressed that the chosen pathway will determine the needs in

¹ FCCC/AWGLCA/2008/8.

² FCCC/AWGLCA/2008/3, paragraph 26.

³ Parties also considered a work programme for 2009 (FCCC/AWGLCA/2008/8, paras. 34–38).

⁴ FCCC/AWGLCA/2008/6.

⁵ FCCC/AWGLCA/2008/6, paragraphs 4–11.

mitigation and adaptation, guide investment decisions and drive innovation, encourage new technology development and accelerate the deployment and diffusion of existing technologies.

8. Parties recalled Articles 2 and 3 of the Convention and identified the **principle of common but differentiated responsibilities** as an important basis for a shared vision. In this regard, some Parties stressed the historical responsibilities of developed countries for causing climate change whereas others advocated the acknowledgement of the evolving application of this principle, in the light of the degree to which the world is changing.

9. As part of the shared vision for long-term cooperative action, Parties addressed the issue of a **long-term goal**, noting that it could help to focus action, particularly in mitigation. Some Parties were of the view that emissions should be reduced by at least 50 per cent by 2050 compared to 1990 levels, and that that target should be underpinned by binding mid-term targets for all developed countries, in the range of at least 25–40 per cent below 1990 levels by 2020. Others suggested similar figures, based on a 2° C limit to the increase in average temperature above pre-industrial levels. Other Parties stressed that in order to discuss numerical goals it was first necessary to discuss the process and conditions for achieving them. In this debate, some Parties considered a possible long-term goal as aspirational, while others wanted it to be mandatory and a basis for burden-sharing.

10. Some Parties argued that the potential impacts of different figures for a long-term goal on the most vulnerable communities, in particular small island developing States (SIDS), least developed countries (LDCs) and Africa, should be considered as a benchmark for the effectiveness and appropriateness of the long-term goal. In this context, some Parties stressed that mitigation-related activities must ensure that long-term temperature increases are much less than 2° C above pre-industrial levels, and that to that end, greenhouse gas concentrations would need to be stabilized as far below 450 ppm carbon dioxide (CO₂) equivalent as possible.

11. In this regard, many Parties pointed to the need to **base a shared vision on rigorous scientific information**, such as that presented by the Intergovernmental Panel on Climate Change (IPCC). Furthermore, Parties noted that such a long-term goal should allow for periodic review as new scientific information comes to light.

12. Parties also noted that a long-term goal should be realistic and feasible, and should take account of the large-scale deployment of new technologies that will be needed in order to achieve such a goal.

B. Enhanced national/international action on mitigation

13. Parties addressed the element on enhanced action on mitigation, stressing the **relationship between mitigation efforts and adaptation needs** and noting that the level of ambition to be agreed in the mitigation block will determine the needs on adaptation.

14. Some Parties highlighted the relationship between sub-paragraphs 1 (b) (i) and 1 (b) (ii) of the Bali Action Plan and stated that balance between these two elements will be key to reaching an agreed outcome and adopting a decision at the fifteenth session of the Conference of the Parties (COP). Other Parties considered the issues addressed in these paragraphs to be quite distinct, as contained in the Bali Action Plan.

15. Further to the views expressed at the first session of the AWG-LCA,⁶ Parties considered the **nature of the contributions** contemplated for both developed and developing countries, and stated that although the nature and scale of commitments and/or actions may be different, all Parties need to play a part in enhancing action on mitigation of climate change, according to the principle of common but

⁶ FCCC/AWGLCA/2008/6, paragraphs 12–27.

differentiated responsibilities and respective capabilities. While stressing the need for a global effort, many Parties were of the view that LDCs would require special consideration.

16. Regarding **nationally appropriate mitigation commitments or actions by developed countries**, Parties considered a range of options, including the possibility of incorporating a broad spectrum of approaches in a given Party's binding actions or commitments, economy-wide targets, and quantified emission reduction commitments based on national targets. Some Parties favoured ambitious mitigation action that is environmentally effective and economically sustainable and stated that the outcome on mitigation should be simple, effective and attractive to all Parties.

17. Parties noted that **nationally appropriate mitigation actions by developing countries** should be considered in the context of sustainable development, economic growth and poverty reduction, and that support for technology, financing and capacity-building was needed to enable Parties to enhance their action, including through actions in specific sectors, in particular renewable energy and energy efficiency.

18. The land use, land-use change and forestry sector was also identified as important and Parties expressed their interest in further discussing the role of the sector in effectively contributing to mitigation. It was recalled that, for some developing countries, mitigation actions are likely to be focused on this sector. Parties agreed it was necessary to move forward the discussion on policy approaches and positive incentives for developing countries to reduce emissions from deforestation and forest degradation, as well as on the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, as agreed upon in the Bali Action Plan.

19. Some Parties stressed that efforts to mitigate climate change will need to support sustainable development efforts and particularly economic development in developed and developing countries. They noted that economic and social consequences of response measures for developed and developing countries would need to be taken into account.

20. Noting the difference in nature of the contributions contemplated in the Bali Action Plan for developed and developing countries, Parties also addressed the differences in the requirements of **measurable, reportable and verifiable commitments and/or actions (MRV)**. Some Parties were of the view that what must be measured, reported and verified by Parties included in Annex I to the Convention (Annex I Parties) is the extent to which emission limitations and reductions comply with quantified objectives. In the case of paragraph 1 (b) (ii) of the Bali Action Plan, Parties felt that MRV applies in relation both to mitigation actions and to the enabling and supporting means to implement those actions.

21. Some Parties were of the view that Parties not included in Annex I to the Convention would implement MRV according to nationally defined procedures, including the definition of the level of implementation of the actions, expressed in physical quantities that are easily verified. The impact of such actions on sustainable development could also be reported. Others were of the view that actions taken by developing countries, but not supported by external sources of funding, would be measured and reported according to national standards, and would not be verified by any international process or entity.

22. Parties were also of the view that experience under the Convention on national communications and inventories would be useful when considering MRV in relation to mitigation. The need to improve methodologies, in particular in accordance with IPCC methodologies, was noted. The importance of Parties providing regular and up-to-date emission inventories and baseline projections was underlined.

23. Parties also addressed the issue of **comparability of efforts** and recalled the views expressed at the first session of the AWG-LCA.⁷ Some Parties were of the view that the discussion should consider comparability between commitment periods as well. Some Parties also suggested that the comparability of efforts should be based on a benchmark against which all Parties measure progress; that such a benchmark should be based on a common base year and a common metric for measuring emissions reductions; and that reductions should be based on national targets.

24. Regarding **cooperative sectoral approaches and sector-specific actions**, Parties recalled the views expressed at the first session of the AWG-LCA.⁸ Parties were of the view that sectoral approaches should not replace national commitments, but can complement them and provide opportunities for targeted actions in certain fields, partnerships between governments and business, and accelerated transfer of technology. Some Parties also suggested that sectoral approaches provide a basis for comparing actions, and would enable MRV by utilizing relevant data and establishing national inventories. Some Parties stressed that consideration of paragraph 1 (b) (iv) should not form the basis for proposals on sectoral mitigation commitments, international technology benchmarks or any other proposal not related to climate change, in particular on issues of competitiveness.

25. Some of the sectors mentioned in the context of cooperative sectoral approaches and sector-specific actions were coal-fired power plants, steel and cement manufacturing, road transportation, energy efficiency, renewable energy, non-CO₂ emissions from livestock agriculture, international aviation and maritime transport, and reduced emissions from deforestation and degradation.

26. Many Parties also felt that mitigation actions can be stimulated and made **cost-effective** by using, among other things, market-based mechanisms. For that purpose, some Parties proposed broadening and deepening the carbon market, including by considering new market mechanisms that go beyond offsetting approaches.

C. Enhanced action on adaptation

27. The consideration of enhanced action on adaptation was facilitated by a workshop on “Advancing adaptation through finance and technology, including national adaptation programmes of action”,⁹ where presentations from the Chairs of the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA) provided background on related work being undertaken in the context of these subsidiary bodies. In particular, the SBI and SBSTA Chairs recalled the work related to decision 1/CP.10; adaptation funding instruments and their review process; national adaptation programmes of action (NAPAs); and the Nairobi work programme on impacts, vulnerability and adaptation to climate change.

28. Presentations made by Parties at the workshop helped to clarify and deepen understanding of the adaptation element of the Bali Action Plan and of the linkages between enhanced action on adaptation and the technology and financing support elements, thus contributing to focus the work of the AWG-LCA. Several proposals were made to help facilitate and implement adaptation actions, including in the areas of financial and technological support for adaptation and its institutional framework. The chair of the workshop summarized the presentations, exchange of views and discussions by Parties at the workshop.¹⁰

⁷ FCCC/AWGLCA/2008/6, paragraphs 8, 19 and 20.

⁸ FCCC/AWGLCA/2008/6, paragraphs 24–26.

⁹ <http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4416.php>.

¹⁰ <<http://unfccc.int/resource/docs/2008/awglca2/eng/crp01.pdf>>.

29. The debate converged around the idea of a **framework to support, facilitate and implement adaptation actions**, and covered four possible areas of focus:

- (a) National planning for adaptation;
- (b) Streamlining and scaling up financial and technological support;
- (c) Enhancing knowledge sharing;
- (d) Institutional frameworks for adaptation.

30. Many Parties underlined the importance of structured approaches towards **national planning for adaptation**. Experience gained from NAPAs, as already discussed at the first session of the AWG-LCA,¹¹ can provide valuable insights. National planning was considered as an instrument to raise national political awareness and mobilize national capacities and resources for adaptation actions, and – in the case of developing countries – also as a means of focusing external financial and technological support.

31. Structured approaches for the development of national plans for adaptation were seen as an integral element in the identification and prioritization of adaptation objectives and actions, and should be conducive to producing assessments of resource needs that would feed into the budgeting process and facilitate the provision of financial and technological support.

32. It was suggested that both the implementation of national plans and the provision of support for them would be measured, reported and verified to maximize the transparency and the effectiveness of resource use.

33. The additionality of climate change impacts to the existing constraints on development efforts was emphasized. The integration of adaptation into development planning as an important catalyst for adaptation action was also underlined. In this light, some Parties expressed the need for new resources to support the integration of adaptation into the development planning process to address the additional burden caused by climate change.

34. Risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance, were seen by several Parties as an integral part of the planning process. In particular, preventive action was deemed to be more effective and efficient than reactive action.

35. Some Parties stressed that the effectiveness of the planning process would be enhanced by enabling environments, including leveraging existing resources and capabilities, putting in place appropriate regulatory environments in support of sustainable development, engaging all stakeholders in the adaptation effort, and establishing policies conducive to economic diversification and other actions that contribute to building economic resilience.

36. With regard to **external financial support for national adaptation actions**, the difficulty of accessing a multiplicity of funding sources was a common theme mentioned by developing country Parties. Parties expressed concern over the fragmentation of available funding both within and outside the UNFCCC process and the conditions imposed for accessing it. The need to understand and remedy these constraints by streamlining funding mechanisms was emphasized.

37. Many Parties expressed their preference for a funding mechanism for adaptation that is governed within the ambit of the Convention and emphasized the need for funding that is appropriate, sufficient and predictable.

¹¹ FCCC/AWGLCA/2008/6, paragraph 32.

38. The integration of adaptation considerations into bilateral and multilateral support programmes was also deemed important by some Parties.

39. Some Parties suggested that technological resources, including early warning systems, should be provided to ensure coverage of the wide variety of options available, ranging from local coping strategies and endogenous technology development to new and frontier technologies.

40. Many Parties stressed the importance of **enhancing knowledge sharing** and best practices in support of cooperation on adaptation. Parties noted the need for sharing information on ongoing work on adaptation to climate change under other processes and forums, in order to ensure coherence and avoid duplication. In addition, it was felt that mechanisms that enable knowledge sharing within and across regions are in need of enhancement. Many regional initiatives provide examples of best practices that can be replicated, supported and scaled up.

41. Parties also emphasized the need for better quality and availability of scientific information in order to enable rigorous assessments of adaptation measures required to respond to the needs of vulnerable countries. These needs include scenario and model outputs relevant to adaptation planning and implementation, tools for needs assessments, the scaling up of meteorological and hydrological resources, and the enhancement of scientific assessments.

42. Parties noted that **institutional frameworks** should be established at the international, regional and national levels to help to create enabling conditions for adaptation actions.

43. Some Parties suggested strengthening the catalytic role of the Convention in stimulating adaptation action by other entities. Another suggestion was for a United Nations system-wide adaptation coordination mechanism that would link to work on adaptation by non-governmental organizations and other relevant stakeholders.

44. Specific proposals made by Parties included:

(a) With regard to national planning for adaptation:

A formal process for preparing *National Adaptation Plans* for all countries;¹²

(b) With regard to streamlining and scaling up financial and technological support:

(i) A *Convention adaptation fund* to complement the Adaptation Fund under the Kyoto Protocol, to which particularly vulnerable developing countries would have access and countries could contribute according to the levels of their national greenhouse gas emissions;¹³

(ii) A *world climate change fund* that encompasses funding for adaptation, technology and mitigation;¹⁴

(iii) *Extending the share of proceeds* for replenishing the Adaptation Fund to joint implementation and emissions trading;¹⁵

¹² Initial proposals were presented in the workshop by Bangladesh and Gambia

<http://unfccc.int/files/adaptation/application/pdf/bangladesh_awgcla2_adaptation_workshop.pdf> and
<http://unfccc.int/files/adaptation/application/pdf/gambia_awgcla2_adaptation_workshop.pdf>.

¹³ An initial proposal was presented in the workshop by Cook Islands on behalf of the Alliance of Small Island States (AOSIS) <http://unfccc.int/files/adaptation/application/pdf/cookislands_awgcla2_adaptation_workshop.pdf>.

¹⁴ An initial proposal was presented by Mexico. Unlike the other initial proposals discussed in paragraph 44, this proposal was presented during “Investment and financial flows to address climate change” workshop (see para. 54) <http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/mexico.pdf>.

- (iv) *Financial compensation* for climate victims and refugees;¹⁶
 - (v) *An international insurance mechanism* to support countries for losses and damage due to extreme events,¹⁷ including the use of micro-insurance;¹⁸
 - (vi) *An innovative mechanism to promote cooperation on research, development and transfer of appropriate adaptation technologies;*¹⁹
- (c) With regard to enhancing knowledge sharing:
- A network of national, regional and international research and technical support centres linked to national adaptation centres;²⁰
- (d) With regard to institutional frameworks for action:
- (i) *A framework for action on adaptation* with clear principles for developed and developing countries, clearly linking adaptation to mitigation. Possible aspects include promoting enabling environments and technology and information, information and financial solutions;²¹
 - (ii) *A strategy to leverage the resources and institutions* that already exist in order to prioritize actions, considering a portfolio of areas of action and international cooperation to assist in the development of national programmes, establishment of priority actions by a variety of actors, and funding from a variety of resources, including official development assistance and international financial institutions;²²
 - (iii) *A United Nations coordination mechanism* to enhance synergies between organizations and processes undertaking adaptation work;²³
 - (iv) *A climate change adaptation committee* under the Convention in charge of planning, organizing, coordinating, monitoring and evaluating international actions, focused on capacity-building and practical action.²⁴

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

45. Following considerations of this element of the Bali Action Plan at the first session of the AWG-LCA,²⁵ the discussion on enhanced action on technology development and transfer to support

¹⁵ An initial proposal was presented in the workshop by China

<http://unfccc.int/files/adaptation/application/pdf/china_awgcla2_adaptation_workshop.pdf>.

¹⁶ An initial proposal was presented in the workshop by Bangladesh (as footnote 12 above).

¹⁷ An initial proposal was presented in the workshop by Cook Islands on behalf of AOSIS (as footnote 13 above).

¹⁸ An initial proposal was presented in the workshop by Bangladesh (as footnote 12 above).

¹⁹ An initial proposal was presented in the workshop by China (as footnote 15 above).

²⁰ Initial proposals were presented in the workshop by Bangladesh, China and Cook Islands (as footnote 12, 15 and 13 above, respectively).

²¹ An initial proposal was presented in the workshop by Slovenia on behalf of the European Community and its member States <http://unfccc.int/files/adaptation/application/pdf/eu_awgcla2_adaptation_workshop.pdf>.

²² An initial proposal was presented in the workshop by the United States of America <http://unfccc.int/files/adaptation/application/pdf/usa_awgcla2_adaptation_workshop.pdf>.

²³ An initial proposal was presented in the workshop by Cook Islands on behalf of AOSIS (as footnote 13 above).

²⁴ An initial proposal was presented in the workshop by China (as footnote 15 above).

²⁵ FCCC/AWGLCA/2008/6, paragraphs 40–56.

action on mitigation and adaptation was facilitated by a workshop on “Effective mechanisms and enhanced means for the removal of obstacles to, and provision of financial and other incentives for, the scaling up of the development and transfer of technology to developing country Parties in order to promote access to affordable environmentally sound technologies; and ways to accelerate deployment, diffusion and transfer of affordable environmentally sound technologies”.²⁶ Presentations from the Chairs of the SBI and the SBSTA provided background on related work being undertaken by Parties in these subsidiary bodies. In particular, the SBI and SBSTA Chairs recalled the work related to the development and transfer of technologies.²⁷ The Chairs also highlighted key relevant activities of the Expert Group on Technology Transfer,²⁸ and forthcoming work under the SBI on the review and assessment of the effectiveness of the implementation of Article 4, paragraphs 1(c) and 5, of the Convention and a strategic programme being elaborated by the Global Environment Facility to scale up the level of investment for technology transfer.

46. Presentations made by Parties at the workshop also helped to clarify and deepen understanding of this element of the Bali Action Plan and of how it relates to enhanced action on mitigation and adaptation and the financing support element, thus helping to focus the work of the AWG-LCA towards exploring possible components of an agreed outcome. The chair of the workshop summarized the presentations, exchange of views and discussions by Parties at the workshop.²⁹

47. The debate covered the following possible areas of focus:

- (a) Removal of obstacles to technology development and transfer;
- (b) Provision of financing and other incentives;
- (c) Technology agreements to scale up cooperative action;
- (d) Institutional arrangements.

48. Parties stressed the key role of technology in addressing climate change and agreed that an integrated approach would require attention to all the stages of the **technology development cycle**, namely research and development (new technologies), demonstration, deployment and diffusion (existing, patented and retrofitted technologies). Some Parties also emphasized that transfer of technology is not the same as trade in technology.

49. Many Parties highlighted the importance of creating enabling environments in order to remove **obstacles** to scaling up development and transfer of technologies and to attract private- and public-sector investment. Areas that need to be addressed in order to create enabling environments for the development and transfer of technologies, for both the providers and the recipients of the technology, include intellectual property rights (IPRs), domestic policies, regulations and standards, and institutional arrangements. Many Parties also highlighted the important role the private sector plays in development and transfer of technologies.

50. The value of international cooperation during the different stages of the technology cycle was noted by Parties. This includes collaborative research and development, strengthening and improving networks between national and regional centres of excellence, sharing technology road maps, and South–South, North–South and triangular cooperation.

²⁶ <http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4416.php>.

²⁷ Decisions 4/CP.7, 3/CP.13 and 4/CP.13.

²⁸ In particular on developing performance indicators for technology transfer; on identification, analysis and assessment of existing and new financing resources for development and transfer of technologies; and on a long-term strategy to facilitate development and transfer of technologies.

²⁹ <<http://unfccc.int/resource/docs/2008/awglca2/eng/crp02.pdf>>.

51. Lack of human and institutional capacity, including the capacity to absorb new technologies, was identified as one of the key **barriers** for developing countries to better adopting, operating, maintaining and diffusing environmentally sound technologies. Parties proposed that enhanced capacity-building should be a key element of an enhanced technology transfer framework.

52. Specific proposals made by Parties include:

- (a) Establishing a new **international mechanism for the development and transfer of technologies**. Key elements of the proposed mechanism included:
 - (i) *An enhanced framework for the development and transfer of environmentally sound technologies*, including scaling up support for existing, and establishing new, financing mechanisms and tools;³⁰
 - (ii) *A multilateral technology acquisition/cooperation fund established under the Convention*.³¹ Resources from the fund could be used to finance the dissemination of existing technologies, purchase licenses of patented technologies, provide incentives to the private sector, support international cooperation on research and development, support venture capital based on a public-private partnership and remove barriers. For SIDS, the fund could be used to fast-track the development of renewable energy technologies;
 - (iii) *An institutional arrangement* to manage the fund, accredit the development and transfer of technology activities and endorse national programmes. This could be a new subsidiary body on development and transfer of technology established under the COP or a technology transfer board supported by panels and/or a clearing house. It could support the implementation of the enhanced technology transfer framework;³²
 - (iv) *Incentives* to reward and credit development and transfer of technologies;³³
 - (v) Performance assessment and monitoring the speed and range of technology flow and the cost-effectiveness of resulting emission reductions;³⁴
- (b) Scaling up **technological cooperation** by enhancing international cooperation on research and development of specific technologies, multilateral cooperation on the deployment of sector-specific technology, establishing joint ventures to accelerate the diffusion and transfer of technology, and sharing technology road maps;
- (c) Creating **enabling environments**, for both the providers and the recipients of the technology, to support domestic and international investment in public and private sectors. This may include reducing the duration of IPRs and introducing differential pricing to promote incentives and remove barriers to technology transfer; developing

³⁰ An initial proposal was presented in the workshop by Ireland on behalf of the European Community and its member States <http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/eu_pres-08-06-02-awglca2_technology.pdf>.

³¹ Initial proposals were presented in the workshop by China <http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/china_presentation_on_tt.pdf>, Brazil <http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/tt_brazil.pdf> and Ghana <http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/ghana_presentation.pdf>.

³² Initial proposals were presented in the workshop by China and Ghana (as footnote 31 above).

³³ Initial proposals were presented in the workshop by Ghana (as footnote 31 above).

³⁴ Initial proposals were presented in the workshop by China and Brazil (as footnote 31 above).

regulatory frameworks for technology agreements in different sectors; and considering structures and funding for improving research, development and demonstration of key technologies;

- (d) Accelerating **research and development** of technology by enhancing networks of centres of excellence and strengthening research in the public domain; working in collaboration; jointly owning the resulting IPRs; and accelerating transfer and diffusion through a global financing arrangement;
- (e) The possibility of creating international research centres, located in different regions, in order to stimulate research in climate-friendly technologies for the benefit of developing countries.

53. Regarding **financial support for technology**, some Parties pointed out the need to distinguish between mitigation and adaptation requirements. For the financing of adaptation technologies, it was said that in most cases it is difficult to attract private sector finance, so the emphasis must be on scaling up public investment.

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

54. Following considerations of this element of the Bali Action Plan at the first session of the AWG-LCA,³⁵ the discussion on enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation was facilitated by a workshop on “Investment and financial flows to address climate change”.³⁶ A presentation from the secretariat recalled relevant elements of the Bali Action Plan and outlined ongoing work under the Convention. The presentation also provided an overview of the investment and financial flows needed for an effective response to climate change and recognized that ensuring climate-change-resilient development will require scaling up of funding, shifts in investment patterns and optimizing the allocation of existing funds. This could be addressed by financial arrangements directly under the Convention, financial options made available through rules of the Convention that create value, and financial options outside the Convention that are nonetheless linked to it.

55. Presentations made by Parties helped to clarify and deepen understanding of this element of the Bali Action Plan and also of its relevance to the other elements of it, helping to focus the work of the AWG-LCA in order to reach an agreed outcome for adoption at COP 15. The chair of the workshop summarized the presentations, exchange of views and discussions by Parties at the workshop.³⁷

56. The debate covered the following possible areas of focus:

- (a) Scaling up financing;
- (b) Optimizing financing;
- (c) Creating enabling environments and appropriate incentives;
- (d) Governance of financial resources under the Convention.

³⁵ FCCC/AWGLCA/2008/6, paragraphs 57–60.

³⁶ <http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4416.php>.

³⁷ <<http://unfccc.int/resource/docs/2008/awglca2/eng/crp03.pdf>>.

57. As stated at the first session of the AWG-LCA, Parties agreed on the need for predictable and sustainable financial resources for mitigation, adaptation and technology cooperation to address climate change.

58. Several Parties noted that, according to estimates, the financial resources required are much greater than those currently available under the Convention. In particular, in relation to adaptation, many Parties noted the urgent need for development of economic valuation or assessment tools to enable determination of the actual costs of adaptation. Many Parties stressed that **additional funding** is needed because climate change imposes an additional burden on sustainable development.

59. In relation to the sources of funding, many Parties noted that some financing requirements can be met through funds under the Convention and market mechanisms whereas others can be met through enabling policies that influence private-sector investments. Many Parties stressed that market mechanisms and private investment do not work well for small developing countries, and that large-scale public investment was needed.

60. A number of Parties suggested that new funds with specific purposes be established. The establishment of several new funds could create a need for an umbrella mechanism to coordinate the management of all funds under the direction of the COP. Other Parties expressed concern over potential **fragmentation** of the financial resources outside the Convention.

61. The need for enabling environments was also mentioned. Some Parties noted that establishing strong national frameworks is essential to enhance climate-friendly investments in a cost-effective way.

62. Many Parties commented on issues related to **governance of financial resources under the Convention**. Governance issues apply both to the funds collected and to the manner in which those funds are disbursed. Governance issues identified include accountability to the COP, equitable and balanced representation of all Parties within a transparent system of governance, direct access to funding, and a country-driven approach. Several Parties proposed principles that should apply to financial resources collected or disbursed under the Convention, including equity, common but differentiated responsibility, the polluter-pays principle, adequacy, predictability, sustainability, new and additional funding, grant funding, simplified access, and priority access for the most vulnerable countries.

63. Specific proposals made by Parties included:

- (a) A *Convention adaptation fund* to be established under the guidance and authority of the COP, and a *world climate change fund* (both referred to in para. 44 above), to support mitigation, adaptation and technology cooperation. As possible sources of funding, Parties proposed:
 - (i) Scaling up funding from developed countries through adding a *percentage of gross domestic product* in addition to existing official development assistance to support an adaptation fund and a multilateral technology acquisition fund;³⁸
 - (ii) *Auctioning a share of assigned amount units* of all Annex I Parties;³⁹
 - (iii) A *global carbon tax* with an exemption for countries whose annual per capita emissions are less than 1.5 t CO₂. The resources generated would flow into a

³⁸ An initial proposal was presented in the workshop by China
<http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/china.pdf>.

³⁹ An initial proposal was presented in the workshop by Norway
<http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/norway.pdf>.

multilateral fund for adaptation and insurance together with national climate change funds;⁴⁰

- (b) *A new financing architecture* consisting of different financing streams to address specific requirements such as technology acquisition and a technology transfer fund, a venture capital fund for emerging technologies, and a collaborative climate research fund;⁴¹
- (c) Other potential sources of financial resources such as a levy on international air travel; extension of the share of proceeds to other mechanisms; and a levy on bunker fuels. Regarding a levy on international travel, some Parties drew attention to the potential impact on the economies of those countries that rely on international trade and tourism;
- (d) That developing countries could earn *credits for implementing nationally appropriate mitigation actions* and that a market for such credits should be created by creating demand through deeper emission reductions commitments for Annex I Parties;⁴²
- (e) *A dedicated African climate change facility* as part of a broader coherent financial architecture under the Convention, which would include a package of technology, finance and capacity-building that responds to the climate change priorities of the region, and its particular institutional, financial and technical challenges and needs.

F. Next steps

64. Taking into account the views expressed at the second session of the AWG-LCA, in particular the ideas and proposals presented by Parties, the AWG-LCA invited Parties to elaborate on them and, where appropriate and to the extent possible, to submit specific textual proposals on the elements of the Bali Action Plan.⁴³

⁴⁰ An initial proposal was presented in the workshop by Switzerland
<http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/switzerland.pdf>.

⁴¹ An initial proposal was presented in the workshop by India
<http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/india.pdf>.

⁴² An initial proposal was presented in the workshop by the Republic of Korea
<http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/republic_of_korea.pdf> and
<http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/text/plain/non-paper_from_korea.txt>.

⁴³ FCCC/AWGLCA/2008/8, paragraph 25.