

Overview of technical papers prepared within the UNFCCC possibly relevant to the work of the Technology Executive Committee.

Summary

- This background paper informs on technical papers prepared by the Expert Group on Technology Transfer (EGTT) and the Secretariat and other bodies under the Convention, since the framework for meaningful and effective actions to enhance the implementation of Article 4.5 of the Convention (the technology transfer framework) was agreed at COP 7, as part of the Marrakesh Accords.
- The objective of this paper is to provide an overview of technical papers prepared under the UNFCCC process to facilitate the discussions of the TEC in choosing possible topics for its technical papers, with a view to build on it and avoid duplication.
- The TEC may wish to consider information contained in this paper when implementing its work plan.

I. Introduction

A. Background

1. The Conference of the Parties (COP), by its decision 1/CP.16, requested the Technology Executive Committee (TEC) to provide an overview of technological needs and analysis of policy and technical issues related to the development and transfer of technologies for mitigation and adaptation, as one of its functions.
2. The COP, by its decision 4/CP.17, adopted the following modalities for the TEC in carrying out the above function of the TEC:
 - (a) Producing periodic technology outlooks; collating, collecting and synthesizing a range of information on technology research and development and other technology-related activities from various sources, including, but not limited to, national communications, nationally determined technology needs and technology needs assessments, national adaptation programmes of action, nationally appropriate mitigation actions, national adaptation plans, and technology road maps and action plans; and examining the policy implications and opportunities for advancing technology development and transfer;
 - (b) Producing a series of technical papers on specific policies and technical issues, including those arising from technology needs assessments;
 - (c) Conducting a regular overview of existing technology development, transfer initiatives, activities and programmes with a view to identifying key achievements and gaps, good practices and lessons learned;
3. The TEC, in its rolling work plan for 2012-2013, included an activity to initiate the preparation of technical papers. In accordance with its work plan, the TEC may wish to consider choosing the topics based on the results of its analytical work, outcomes of the thematic dialogues, result of the inventories, and analysis of technology needs assessments. The TEC may engage relevant organizations in preparing the technical papers.

B. Scope of the note

The note informs on technical papers prepared by the secretariat and the Expert Group on Technology Transfer (EGTT) since the framework for meaningful and effective actions to enhance the implementation of Article 4.5 of the Convention (the technology transfer framework) was agreed at COP 7, as part of the Marrakesh Accords. In addition it provides information on technical papers possibly relevant to the work of the TEC prepared by other bodies under the Convention.

C. Objective of the paper

4. The objective of this paper is to provide an overview of technical papers prepared under the UNFCCC process to facilitate the discussions of the TEC in choosing possible topics for its technical papers, with a view to build on it and avoid duplication.

D. Possible action by the TEC

5. The TEC may wish to consider information contained in this paper when implementing its work plan.

II. Inventory of technical papers under the Convention

A. Expert Group on Technology Transfer and the Secretariat

6. The Expert Group on Technology Transfer (EGTT) was established at the seventh session of the COP in 2001, with the objective of enhancing the implementation of Article 4, paragraph 5, of the Convention, including by analyzing and identifying ways to facilitate and advance technology transfer activities and making recommendations to the SBSTA. The COP at its thirteenth session, agreed to reconstitute the EGTT for a further five years. The COP, at its sixteenth session decided to terminate the mandate of the EGTT at the conclusion of the COP-16.

7. Within its work the EGTT prepared numerous documents in response to requests by the SBSTA and SBI to facilitate and advance the development and transfer of technology under the Convention. It elaborated on the five key themes of the technology transfer framework: technology needs assessments, technology information, enabling environments, capacity building, and mechanisms, and later also on the sub-themes: innovative financing and technologies for adaptation, which were added to the technology transfer framework at COP 13. The EGTT also elaborated on a number of technical papers to assist Parties with the implementation of technology transfer activities and with overcoming of barriers and gaps to the development and transfer of technologies. An overview of the technical papers of the EGTT is provided below.

1. Enabling Environments for technology transfer

8. The SBSTA at its seventeenth session requested the secretariat to prepare a technical paper on enabling environments for technology transfer¹ for consideration by the EGTT at its third meeting to be made available to the SBSTA at its eighteenth session.

9. The technical paper aimed to:

- (a) Highlight the issues surrounding the enabling environment topic;
- (b) Analyse progress on the creation of domestic and international environments and to synthesize success and, to the extent possible, failure stories in both international transfer, and international support for diffusion of adaptation and mitigation technologies under the Convention;
- (c) Present some cross-cutting conclusions and suggest steps that may be taken for further analysis on the subject.

10. The EGTT, in finalizing the technical paper drew several conclusions including that:

- (a) Barriers to technology transfer exist at every stage of transfer in a variety of forms including technical, economic, political, cultural, social, behavioural and/or institutional;

¹ FCCC/TP/2003/2

- (b) Although national circumstances differ widely, opportunities exist for facilitating technology transfer through appropriate enabling environments in transferring and recipient countries;
- (c) Successful technology transfer is highly dependent on the involvement of a wide variety of stakeholders, and governments have a crucial role in creating favourable conditions; and
- (d) Although the focus of enabling environments and international technology transfer has been on mitigation technologies, it is important to foster enabling environments that encourage the transfer of adaptation technologies.

2. Capacity-building for technology transfer

11. The SBSTA, at its seventeenth session, requested the secretariat to prepare a technical paper on capacity-building² for technology transfer for consideration by the EGTT, to make it available at its nineteenth session.

12. The technical paper aimed to:

- (a) Give an overview of experiences by different international organizations and institutions of on-going capacity-building activities;
- (b) Summarize lessons learnt from capacity-building activities to identify gaps and overlaps in their implementation;
- (c) To identify priority actions in capacity-building for technology transfer in the context of the UNFCCC process;
- (d) To present some conclusions and suggest possible steps that may be taken on this subject.

13. The technical paper outlined experiences, lessons learned, success stories and challenges in building the capacity of developing country Parties and Parties with economies in transition in the development and transfer of technologies.

3. Technologies for adaptation to climate change

14. The SBSTA, at its twentieth session, requested the secretariat to prepare a technical paper on the applications of ESTs for adaptation to climate change³ and make it available for consideration by the SBSTA at its twenty-fourth session.

15. The paper considered possible activities that could enhance or be responsive to the SBSTA five-year programme of work on impacts, vulnerability and adaptation to climate change.

The technical paper aimed to provide an overview of:

- (a) The current knowledge and understanding of adaptation to climate change,
- (b) A framework for assessing technologies for adaptation to climate change,
- (c) The process of technology development and transfer as relevant to adaptation to climate change,
- (d) Examples of important technologies for adaptation in five sectors (coastal zones, water resources, agriculture, public health, and infrastructure), together with three case studies for each sector, and

² FCCC/TP/2003/1

³ FCCC/TP/2006/2

- (e) A synthesis of findings that have implications for climate policy.

16. The paper argued that many technologies exist to adapt to natural weather related hazards and that these technologies can also play an important part in reducing vulnerability to climate change. The paper provided an overview of the current knowledge and understanding of adaptation to climate change; a framework for assessing technologies for adaptation to climate change; the process of technology development and transfer as relevant to adaptation to climate change; examples of important technologies for adaptation in five sectors (coastal zones, water resources, agriculture, public health and infrastructure), together with case studies for each sector; and a synthesis of findings that have implications for climate policy.

4. Innovative options for financing the development and transfer of technologies

17. The SBSTA, at its twenty-first session, endorsed the work programme of the EGTT for 2005⁴ which included the preparation of a technical paper on innovative options for financing the development and transfer of technologies⁵, drawing on, inter alia, the outcome of the UNFCCC workshop on innovative options for financing the development and transfer of technologies, held in Montreal in September 2004, and the background paper prepared by the secretariat for that workshop. The EGTT, at its ninth meeting in May 2006, reviewed the draft technical paper and decided to submit it for consideration by the SBSTA at its twenty-fifth session.

18. The technical paper aimed to:

- (a) Highlight the issues surrounding the topic of innovative financing for technology transfer related to climate change;
- (b) Analyse progress in the area of innovative financing, both in the public and private sectors and synthesize successes and, to the extent possible, failures;
- (c) Present conclusions and suggest steps that may be taken for further analysis on the subject.

19. The paper provided an overview of issues related to innovative financing for technology transfer. It included an analysis of progress in the area of innovative financing, both in the public and private sectors, and a synthesis of successes and failures. The paper argued that creating innovative options for financing the transfer of ESTs implies finding new ways to 'connect' actors and interests, and not just designing or developing new financing products. The paper elaborated on options, including case studies from mitigation and adaptation practice.

5. Best practices in Technology Needs Assessments

20. The SBSTA at its twenty-sixth session, requested the secretariat to make available to Parties a technical paper on good practices in conducting Technology Needs Assessments (TNAs)⁶ based on outcomes of the workshop on best practices, the TNA synthesis report⁷, recently completed TNAs and other relevant documents.

21. The objectives of this paper were to:

- (a) Compile and synthesize good practices from the TNAs completed so far by the Parties;

⁴ FCCC/SBSTA/2004/13

⁵ FCCC/TP/2006/1

⁶ FCCC/TP/2007/3

⁷ FCCC/SBSTA/2006/INF.1

- (b) Help countries that had yet to conduct the TNA, either on a stand-alone basis or as a part of their national communications, to easily find means to encourage technology transfer and ensure that lessons learned from the Parties that are more advanced in this process can be more widely shared;
- (c) Help those countries that want to update the TNAs to better identify problems and gaps and improve the quality of their studies;
- (d) Inspire the discussions and serve as a source of information for the participants as the workshops on best practices and national communications.

22. The paper compiled and synthesized good practices in TNAs, specifically in conducting, reporting and implementing results of TNAs. The paper also provided issues for further consideration with a view to improve the TNA process.

23. The EGTT at its twelfth meeting stressed the importance of mainstreaming the results of TNAs into national development plans and of obtaining funding for conducting and updating the TNAs. The group also discussed the development of project proposals based on TNAs; the need to better describe co-benefits of technology transfer in the TNA studies; and the importance of stakeholder engagement throughout the TNA process.

6. Report on options to facilitate collaborative technology research and development

24. The SBSTA, at its thirty-first sessions, endorsed the terms of reference for a report by the EGTT on options to facilitate collaborative technology research and development⁸ (R&D). It requested the EGTT, in preparing this report, to focus on collaborative technology R&D to enhance action on mitigation and adaptation under the Convention, and how collaborative technology R&D activities outside the Convention can support this action.

25. The report suggested that the following goals, relevant to developing countries, need to be addressed:

- (a) Adaptation/modification of existing technologies/products for local conditions and contexts;
- (b) Development of technologies and products, including endogenous technologies, for unaddressed needs that are specific to developing countries;
- (c) Long-term R&D.

26. The report presented options to facilitate collaborative R&D relevant to ETSS to enhance action on mitigation and adaptation, based on the review of existing collaborative technology R&D activities. The report argued that developing countries have very varied technical needs and capabilities, therefore the relevance of a collaborative R&D option will depend on both the objective of the collaborative R&D and the country where it is implemented, and that it is important to take into account the key features, including focus, R&D actors (firms, governments, academia, non-profit organizations), organizational models (two-actor, multiple-actors/consortia, networks), as well as funding sources (public, private, philanthropic) and models (project-centred or programmatic).

7. Recommendations on future financing options for enhancing the development, deployment, diffusion and transfer of technologies under the Convention.

27. The SBSTA and the Subsidiary Body on Implementation (SBI), at their twenty-ninth sessions, requested the EGTT to prepare a report on future financing options for enhancing the development, deployment, diffusion and transfer of technologies⁹ as input to the fifth

⁸ FCCC/SBSTA/2010/INF.11

⁹ FCCC/CB/2009/2

session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA).

28. This document presented the recommendations of the EGTT on future financing options necessary for enhancing the development and transfer of technologies, for consideration by the subsidiary bodies at their thirtieth sessions. It presented three indicative financing options, for enhancing the development and transfer of technologies under the Convention:

- (a) The enhancement of existing and emerging technology financing arrangements;
- (b) A decentralized or centralized comprehensive new international technology financing scheme; and
- (c) Limited new technology financing and coordination arrangements with sectoral activities.

29. The document also presented recommendations on the role of new financing mechanisms and tools for scaling up development and transfer of technologies. The three options above were presented as a continuum ranging from an enhancement of existing financing mechanisms to the establishment of a centralized international financing scheme under the Convention.

8. Strategy paper for the long-term perspective beyond 2012, including sectoral approaches, to facilitate the development, deployment, diffusion and transfer of technologies under the Convention.

30. The Conference of the Parties (COP), by its decision 3/CP.13, requested the EGTT to elaborate a strategy paper for the long-term perspective beyond 2012, including sectoral approaches¹⁰ that could draw on the work undertaken by Parties in processes under and outside the Convention as well as the results of work undertaken by other international organizations and forums to be considered by the SBs at their thirtieth sessions.

31. The overall objective of this work was to develop, for the long-term perspective beyond 2012, a strategy paper, including sectoral approaches, to facilitate the development, deployment, diffusion and transfer of technologies under the Convention.

32. The three background papers were prepared within this work:

- (a) Technology research and development: “Identify and assess effective means and ways that could greatly enhance investments in research and development of innovative technologies”;
- (b) Technology deployment and demonstration: “Identify and assess effective means and ways that could accelerate deployment and demonstration of technologies for mitigation and adaptation”;
- (c) Technology diffusion: “Identify and assess effective means and ways that could scale up diffusion of existing technologies for mitigation and adaptation”.

33. This paper presented an integrated strategy with a long-term vision, strategic objectives and options as well as the possible implementation approaches from functional and administrative perspectives. It organized options from the three technology stages into four potential programme elements, provided comparative information on the resource requirements, mitigation and adaptation effects, and feasibility of these options. It described relationships between programmes under and outside the UNFCCC process.

¹⁰ FCCC/SB/2009/3

9. Performance indicators to monitor and evaluate the effectiveness of the implementation of the technology transfer framework

34. The SBSTA, at its twenty-eighth session, endorsed the terms of reference for this work which, together with the rolling programme of work of the EGTT for 2008–2009, requested a final report containing recommendations for using the performance indicators¹¹ to be made available to the COP at its fifteenth session.

35. The overall objective of the work summarized in this report was to develop and test a balanced and robust set of performance indicators that could be used by the SBI to monitor and evaluate the effectiveness of the implementation of the technology transfer framework. The work was divided into three tasks:

- (a) Task I: develop a set of candidate performance indicators (June to October 2008);
- (b) Task II: test the set of performance indicators (December 2008 to May 2009);
- (c) Task III: prepare recommendations for using the indicators (June to December 2009).

36. The report presented a set of 40 performance indicators, an overview of the selection and testing process, and an indication of the resources involved in gathering the data required for each indicator. It contained recommendations for using the indicators and possible steps for obtaining the data. The indicators covered both the overall vision of the technology transfer framework, as synthesized into concrete objectives, and the financial flows provided for technology transfer.

B. Relevant technical papers elaborated by other bodies under the Convention

37. Numerous technical papers have been prepared under the UNFCCC process to support the work of Parties and enhance progress on a cross-sectorial, sectorial, or technology level. Several technical papers have been elaborated in the areas possibly relevant to the work of the TEC. They included at the cross-sectorial level: capacity building, emission reduction targets, emissions inventories and reporting, climate impacts, financial sources and financial flows, integrating practices, tools and systems for climate risk assessment, and management of strategies for disaster risk reduction.

38. On the sectorial and technology level the technical papers covered: adaptation strategies planning and technologies, national adaptation programmes of action (NAPA), afforestation and reforestation and agriculture. The table in Annex I contain a list of technical papers elaborated under the UNFCCC process which could be possibly relevant to the work of the TEC.

C. Possible topics for technical papers discussed at the 3rd meeting of the Technology Executive Committee

39. At the 3rd meeting of the Technology Executive Committee (TEC) the Chair invited the TEC members to discuss possible topics of its technical papers, taken into account the results of its analytical work, outcomes of the thematic dialogues, result of the inventories and analysis of technology needs. In the discussion the following suggestions for possible topics of technical papers were made by the members:

¹¹ FCCC/CB/2009/4

- (a) Enabling environment and barriers to technology development and transfer;
 - (b) Technology verification;
 - (c) Innovative financing;
 - (d) Public Private Partnerships with a focus on technology issues;
 - (e) Restoration of coral reefs;
 - (f) Water management;
 - (g) Biofuels;
 - (h) Ocean energy;
 - (i) Energy supply and energy efficiency;
 - (j) Performance metrics for assessing projects;
 - (k) R&D collaborative models;
 - (l) Guidebook on technologies for adaptation linked to roadmaps and action plans;
40. The TEC agreed to prepare an overview of technical papers prepared within the UNFCCC process relevant to its work to build on it and avoid duplication.

Annex I:

1. The following table contains a list of technical papers, including a short description of each paper.

Title of the Technical Paper	Topic and abstract	Year
1. Water and climate change impacts and adaptation strategies. (FCCC/TP/2011/5)	Adaptation strategies. Building on recent reviews on climate change impacts on freshwater resources and adaptation strategies, this technical paper analyses existing scientific information on observed and projected impacts of climate change on water, provides information on links between climate change and freshwater resources and on adaptation to climate change in the water sector.	2011
2. Potential costs and benefits of adaptation options: A review of existing literature. (FCCC/TP/2009/2/Rev.1)	Adaptation planning. Building on recent reviews on the costs and benefits of adaptation, this technical paper analyses the general methodological issues for estimating the costs and benefits of adaptation options, reviews studies on the economics of adaptation in light of these methodological issues, and discusses the strengths and weaknesses of the studies and methods. Key findings from the paper include: the benefits of adopting multiple methods and approaches, including non-monetary ones; the need for further methodology development, including in relation to the treatment of uncertainty, economic valuation and equity; and the continued lack of detailed analyses of the costs and benefits of adaptation, including in a form that is relevant to decisions on public funding.	2009
3. Mechanisms to manage financial risks from direct impacts of climate change in developing countries. (FCCC/TP/2008/9)	Assessment of impact, vulnerability and adaptation. This technical paper provides information on the financial mechanisms used to manage risks from the direct impacts of climate change. The mechanisms described include both insurance mechanisms and other forms of risk sharing, referred to as non-insurance mechanisms. Developing countries require a portfolio of mechanisms, which may include insurance, to manage risks, as no single mechanism is able to meet the range of circumstances required by all countries. The paper considers hazards, assets and vulnerability in the context of climate change, and reviews options for managing financial risks from impacts of climate change in developing countries. It also proposes three innovative financing schemes for this purpose. The role of external support in helping developing countries finance appropriate risk-sharing mechanisms is part of this consideration.	2008
4. Synthesis of available information for the preparation of national adaptation programmes of action. (FCCC/TP/2005/2)	National Adaptation Programmes of Action (NAPA). This technical paper prepared by the LEG provides guidance on synthesis of available information in the preparation of NAPA. It responds to a need identified by least developed country Parties during regional workshops on NAPA preparation held by the LEG in 2003. The paper covers the nature of information to be sought as well as ways to access sources of this information. Collating existing information can facilitate rapid assessment of vulnerability and adaptation and inform the NAPA preparation process.	2005
5. Elements for implementation strategies for national adaptation programmes of action. (FCCC/TP/2005/5)	National Adaptation Programmes of Action (NAPA). This technical paper prepared by the LEG provides elements for implementation strategies for NAPA. It responds to a need identified by Parties and NAPA teams for further guidance on ranking for urgency, funding sources, institutional frameworks	2005

	for NAPA implementation, mainstreaming, and monitoring and evaluation of NAPA activities.	
6. Regional synergy in the context of national adaptation programmes of action. (FCCC/TP/2005/4)	National Adaptation Programmes of Action (NAPA). This paper presents a synthesis of information relating to regional synergy in the context of adaptation to climate change that could be useful in the preparation and implementation of NAPA. The paper reviews NAPA proposals as well as other relevant documents. It also describes relevant existing programmes and projects undertaken by various international entities, with the aim of identifying opportunities for cooperative action during the NAPA process. The paper identifies possible action by which the LEG can enhance the promotion of regional synergy during the preparation and implementation of NAPA.	2005
7. Synergy among multilateral environmental agreements in the context of national adaptation programmes of action. (FCCC/TP/2005/3)	Adaptation to climate change. This paper presents a synthesis of information relating to adaptation to climate change in the context of creating synergy among multilateral environmental agreements (MEAs), which could be helpful in the preparation and implementation of NAPA. The paper reviews NAPA proposals and other relevant documents. It also presents relevant existing programmes and projects under the three Rio Conventions, the Global Environment Facility and its implementing agencies, and the UN University. The paper concludes with lessons learned and identifies possible action whereby the LEG can enhance the promotion of synergy among MEAs during the preparation and implementation of NAPA.	2005
8. Technological issues. Adaptation technologies. (FCCC/TP/1997/3)	Adaptation technology. An overview paper on adaptation.	1997
9. Identification and implementation of medium- and long-term adaptation activities in least developed countries. (FCCC/TP/2011/7)	LDC work programme, NAPA. This technical paper discusses the identification and implementation of medium- and long-term adaptation activities in the LDCs. It builds on the experiences gained from implementing the LDCs work programme, in particular on the preparation and implementation of NAPA. It provides an account of how elements of the preparation of NAPA can help inform adaptation activities. It contains case studies performed in order to generate a deeper understanding of considerations regarding adaptation activities at the country level. It also contains information on experiences of developing and developed countries, as well as from other multilateral programmes, in implementing adaptation activities.	2011
10. Quantified economy-wide emission reduction targets by developed country Parties to the Convention: assumptions, conditions and comparison of the level of emission reduction efforts. (FCCC/TP/2011/1)	Emission reduction targets. This technical paper presents an overview of the quantified economy-wide emission reduction targets to be implemented by developed country Parties, as well as assumptions related to the attainment of these targets, and discusses comparison of the emission reduction efforts. The paper is based on submissions by Parties and on assumptions and conditions related to the attainment of quantified economy-wide emission reduction targets by developed country Parties.	2011
11. Issues relating to the transformation of pledges for emission reductions into quantified emission limitation and reduction objectives. (FCCC/TP/2010/2)	Emission reduction targets. This technical paper presents issues relating to the transformation of pledges for emission reductions into quantified emission limitation and reduction objectives (QELROs). It provides a brief explanation of this transformation and illustrates the effect that different variables have on it. The paper introduces the concepts of QELROs and	2010

	assigned amounts, covers issues relating to the transformation of pledges into QELROs, including the effects of different variables on the resulting values, introduces additional considerations including used base year, the accounting of LULUCF and the implications of efforts and achievements by Parties to date.	
12. Analysis of possible means to reach emission reduction targets and of relevant methodological issues. (FCCC/TP/2008/2)	Emission reduction targets. This paper analyses ways to enhance the effectiveness and the contribution to sustainable development of the means that may be available to Annex I Parties to reach their emission reduction targets, as well as relevant methodological issues, including methodologies to be applied for estimating anthropogenic emissions and the global warming potentials of greenhouse gases. This paper provides a brief analysis of possible impact on the carbon market, implications for domestic mitigation, and benefits and costs.	2008
13. Information on global warming potentials. (FCCC/TP/2004/3)	Reporting and emissions inventory review. Global Warming Potentials (GWPs) are used to estimate, compare and aggregate the relative climate effects of various GHGs. They are a measure of the relative radiative effect of a given substance compared to another, integrated over a chosen time horizon. This technical paper provides basic information on GWPs and their use under the Convention and the Kyoto Protocol, in particular their use in guidelines for reporting GHG inventories and for preparation of NCs by Parties.	2004
14. Physical and socio-economic trends in climate-related risks and extreme events, and their implications for sustainable development. (FCCC/TP/2008/3)	Climate impacts This technical paper, prepared in the context of the Nairobi work programme, draws on the information provided by the IPCC in outlining the physical and socioeconomic trends in climate-related risks and extreme events for developing countries, particularly for the LDCs and SIDSs, and the implications for sustainable development.	2008
15. Issues arising from the implementation of potential project activities under the clean development mechanism: the case of incineration of HFC-23 waste streams from HCFC-22 production. (FCCC/TP/2005/1)	Hydrofluorocarbons. This technical paper was prepared by the secretariat to facilitate the consideration by Parties of agenda item 5 (b) of the twenty-second session of the SBSTA. It presents issues raised by experts on those CDM project activities that seek to earn certified emission reductions (CERs) by incinerating hydrofluorocarbon 23 waste streams from hydrochlorofluorocarbon 22 (HCFC-22) production. The issues include the potential impact of the revenue stream from CERs on the level and location of HCFC-22 production and implications for the achievement of objectives under the Montreal Protocol on Substances that Deplete the Ozone Layer, notably relating to the eventual phasing out of such production in developing countries, and under the UNFCCC.	2005
16. Cost of implementing methodologies and monitoring systems relating to estimates of emissions from deforestation and forest degradation, the assessment of carbon stocks and greenhouse gas emissions from changes in forest cover, and the enhancement of forest carbon stocks. (FCCC/TP/2009/1)	Afforestation and reforestation. This paper provides an overview of the possible steps and requirements needed to develop and implement a monitoring system for estimating emissions from deforestation and forest degradation, assessing carbon stocks and GHG emissions from changes in forest cover, and assessing the enhancement of forest carbon stocks. This paper aims to facilitate the better understanding of the associated costs of the implementation of methodologies and monitoring systems related to estimates of emissions from deforestation and forest degradation, the assessment of carbon stocks and GHG emissions from changes in forest cover, and the enhancement of forest carbon stocks.	2009

<p>17. Simplified modalities and procedures for small-scale afforestation and reforestation project activities under the clean development mechanism. (FCCC/TP/2004/2)</p>	<p>Afforestation and reforestation. This technical paper was based on submissions by Parties and on the work by the CDM Executive Board. It presents the following issues: clarifications on definitions of eligible small-scale afforestation and reforestation projects; categories of projects for which methodologies can be simplified; simplified modalities and procedures for small-scale afforestation and reforestation projects; a project design document; the structure of an indicative baseline and monitoring methodologies for selected types of small-scale afforestation and reforestation projects under the CDM; and criteria for determining the occurrence of debundling of projects.</p>	
<p>18. Estimation, reporting and accounting of harvested wood products. (FCCC/TP/2003/7)</p>	<p>Reporting and emissions inventory. This paper provides technical information on estimating, reporting and accounting of harvested wood products. It contains a set of definitions relating to wood products, global data on stocks and trade of wood products and descriptions of methodologies for estimating and measuring carbon stocks contained in these products. It describes the socio-economic and environmental impacts of different approaches for accounting. Each approach is analysed with regard to the implications of accounting of emissions and removals on prices, demand and supply of wood products, bioenergy, recycling, selected social variables, the environment, incentives for sustainable forest management, and the emission-limitation targets under the Kyoto Protocol. Examples of the possible effects of different approaches on national GHG emissions and removals in selected countries are also provided.</p>	2003
<p>19. Approaches to monitoring and evaluation of capacity-building at different levels. (FCCC/TP/2008/5)</p>	<p>Capacity building. This technical paper analyses options for monitoring and evaluation of climate change capacity building activities. It explores the policies, frameworks and approaches to capacity issues, and monitoring and evaluation of capacity-building activities being pursued under the Convention and its Kyoto Protocol; reviews and analyses approaches to monitoring and evaluation of capacity-building used in other fields that may be relevant and applicable to monitoring and evaluation of capacity building in the areas of the capacity building framework for developing countries under decision 2/CP.7; and offers lessons learned that could be taken into account in further discussions on monitoring and evaluation under the capacity building framework.</p>	2008
<p>20. Range and effectiveness of capacity-building activities in developing countries aimed at implementing decision 2/CP.7. (FCCC/TP/2004/1)</p>	<p>Capacity building. This technical paper contains analyses and findings of capacity-building activities in developing countries, based on information provided by Parties in their submissions; documents produced by the secretariat; the capacity-building technical paper; and reports by the GEF and by bilateral and multilateral agencies. It also outlines lessons learned in implementing capacity building activities and programmes, and key issues that Parties may wish to consider in relation to the review of the implementation of decision 2/CP.7.</p>	2004
<p>21. Investment and financial flows to address climate change: An update. (FCCC/TP/2008/7)</p>	<p>Financial needs assessment. Financial sources. This technical paper provides an update to the paper on investment and financial flows to address climate change which was published by the secretariat in 2007. This update was requested by the AWG-LCA, at its second session, taking into account paragraph 1 of decision 1/CP.13 (the Bali Action Plan). The paper presents different options, tools and mechanisms to enhance financing for mitigation, adaptation and technology cooperation. The assessment is enriched by</p>	2008

	information submitted by Parties and other observer organizations as part of the work of the AWG-LCA. The paper also presents new information available on the financial flows.	
22. Review of the experience of international funds, multilateral financial institutions and other sources of funding relevant to the current and future investment and financial needs of developing countries. (FCCC/TP/2007/4)	Funding sources. This technical paper provides an overview of the practices of the following multilateral development banks (MDBs) in supporting climate-relevant sectors: the African Development Bank, the Asian Development Bank, the World Bank (International Bank for Reconstruction and Development and International Development Association), the European Investment Bank, the Inter-American Development Bank and the European Bank for Reconstruction and Development. Information on the International Finance Corporation, the branch of the World Bank that provides private-sector support, is also included. The findings and analyses presented in this paper are based on inputs provided by MDBs, data from the OECD, Creditor Reporting System, and information available in a background paper prepared by the UNFCCC, which covers an assessment of the investment and financial flows needed in 2030 to meet worldwide mitigation and adaptation needs under different scenarios of social and economic development.	2007
23. Funding adaptation in developing countries: extending the share of proceeds used to assist in meeting the costs of adaptation; and options related to assigned amount units of Parties included in Annex I to the Convention. (FCCC/TP/2008/6)	Other funding sources. This technical paper analyses options for funding adaptation in developing countries, by extending the share of proceeds or generating revenue from assigned amount units. In conducting this analysis, the paper explores the scale of the funding that could be raised for adaptation under each option, possible impacts of the options on the carbon market and, where appropriate, issues involved in the monetization of Kyoto units provided to the Adaptation Fund.	2008
24. Trends of financial flows and terms and conditions employed by Multilateral Lending Institutions. First technical paper on terms of transfer of technology and know-how. (FCCC/TP/1997/1)	Financial flows, technology transfer. The COP requested the secretariat to prepare a paper on the terms of transfer of technology and know-how. The paper was compiled from available information provided by multilateral development banks and other institutional organizations. The paper was synthesized by the secretariat to provide Parties with an overview of investment trends and terms, particularly those of multilateral institutions. The information presented includes an overview of financial flows between countries, focusing on flows from developed to developing countries and to countries with economies in transition.	1997
25. Integrating practices, tools and systems for climate risk assessment and management and strategies for disaster risk reduction into national policies and programmes. (FCCC/TP/2008/4)	Risk management and reduction. This technical paper, prepared in the context of the Nairobi work programme outlines the needs, practices, tools and systems for advancing the integration of adaptation and disaster risk reduction into national policies and programmes. The information could also be considered by Parties and organizations in their efforts in adaptation to address the adverse effects of climate change, in particular addressing climate risk assessment and management and strategies for disaster risk reduction, at the national and international levels.	2008
26. Challenges and opportunities for mitigation in the agricultural sector. (FCCC/TP/2008/8)	Mitigation strategies. The paper aims to contribute to the better understanding of the challenges and opportunities for mitigation in the agricultural sector, with consideration of the regional and national circumstances for the feasibility and applicability of the mitigation practices. This paper provides an overview of mitigation practices for the agricultural sector, and identifies	2008

	relevant policies and measures. It addresses the mitigation potential of each mitigation practice presented, as well as methodological and technical challenges, and possible barriers for their implementation. Knowledge gaps and research and development needs on mitigation practices are identified as the basis of recommendations for future work. Background information on emissions, trends and projections in relation to livestock, and crops and soils are also presented in the paper.	
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