



Subsidiary Body for Implementation

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Nationally appropriate mitigation actions by developing country Parties

**Work programme to further the understanding of the diversity
of nationally appropriate mitigation actions**

Compilation of information on nationally appropriate mitigation actions to be implemented by developing country Parties

Revised note by the secretariat

Summary

This document presents a compilation of the information on all nationally appropriate mitigation actions (NAMAs) communicated by developing country Parties to date. The compilation comprises the NAMAs contained in documents FCCC/AWGLCA/2011/INF.1 and FCCC/AWGLCA/2012/MISC.2 and Add.1 and those communicated by six developing country Parties, which have not previously been included in an official UNFCCC document.

The information communicated on NAMAs submitted in response to a Notification to Parties dated 18 January 2010 includes related context, conditions and considerations associated with the NAMAs, including with regard to the support required for their preparation and implementation. Information subsequently communicated includes information on underlying assumptions and methodologies, sectors and gases covered, global warming potential values used and estimated mitigation outcomes.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), at its eighteenth session, requested the secretariat to prepare an information note for the subsidiary bodies that compiles the information contained in documents FCCC/AWGLCA/2011/INF.1 and FCCC/AWGLCA/2012/MISC.2 and Add.1 and to update it with new information as communicated by Parties.¹

B. Scope

2. This document presents the information communicated by developing country Parties on the nationally appropriate mitigation actions (NAMAs) that they intend to implement. At the time of publishing, a total of 57 Parties and a group of Parties had communicated information on such NAMAs to the secretariat.

3. The information on NAMAs communicated by developing country Parties in response to a Notification to Parties dated 18 January 2010² includes related context, conditions and considerations associated with the NAMAs, including with regard to the support required for their preparation and implementation. Subsequently, some developing country Parties communicated information on NAMAs in response to an invitation made by the COP at its seventeenth session,³ including on underlying assumptions and methodologies, sectors and gases covered, global warming potential values used and estimated mitigation outcomes.

C. Background and approach

4. This document comprises the following:

(a) The information contained in document FCCC/AWGLCA/2011/INF.1, which has been reproduced without any changes;

(b) The submissions included in document FCCC/AWGLCA/2012/MISC.2 and Add.1, which have been compiled using the approach followed with the submissions contained in document FCCC/AWGLCA/2011/INF.1;

(c) The information on NAMAs communicated by Burkina Faso, Dominica, Cook Islands, Kyrgyzstan, Gambia and Guinea, which has not previously been included in an official UNFCCC document. These submissions have been compiled in this document following the same approach as for the above-listed submissions.

5. For information on NAMAs communicated by Parties in languages other than English, and where a translation was not provided by the respective Party, the secretariat

¹ Decision 1/CP.18, paragraph 17. In accordance with this decision, Parties' communications to the secretariat that are included in this information document are considered communications under the Convention.

² See <<http://unfccc.int/home/5262.php>>.

³ Decision 2/CP.17, paragraph 34.

has undertaken an informal translation. These translations are provided for the purpose of information only and are without prejudice to the original communication.⁴

6. This document will be updated to include any new and/or additional information on NAMAs communicated to the secretariat by developing country Parties. A revised version will be issued for the consideration of the subsidiary bodies at future sessions, as appropriate.

II. Information communicated by developing country Parties

Afghanistan

7. Afghanistan communicated that its NAMAs would include the preparation of its initial national communication, including its national greenhouse gas (GHG) inventory. The Party added that specific mitigation strategies and activities appropriate to the national context would also form part of the initial national communication.

8. Afghanistan also called for further technical collaboration and negotiation between Parties in the lead-up to COP 16, which it hoped would establish an effective, functional, comprehensive and equitable climate change regime beyond 2012, in line with the ultimate objective of the Convention.

African Group

9. The African Group emphasized the central role that agriculture plays in the economic and social development of its people. It was mentioned that the priorities for Africa and its communities are to: ensure food security; eradicate poverty and enhance socioeconomic development; and ensure environmental and livelihood sustainability by adapting to the effects of climate change and identifying the potential co-benefits of mitigation.

10. The information communicated by the African Group included a list of NAMAs, as outlined below, with a deadline for implementation of 2020.

11. Firstly, information was communicated on NAMAs in the following investment areas:

(a) Changes in agricultural systems, including in agroforestry; protected cultivation; hydroponics; aquaponics; mixed farming; integrated farming; precision agriculture; and organic farming;

(b) Changes in agricultural practices, including changing planting dates; changing varieties/breeds; adopting sustainable land management techniques and approaches; supplementary livestock feeds; integrated pest management; crop rotation; production of healthy seeds and planting material; post-harvest handling and storage; and soil health and fertility management;

(c) Changes in agricultural water management, including water harvesting; reuse and recycling; on-farm irrigation, where appropriate; soil and water conservation; and watershed management;

(d) Agricultural diversification, including promoting improved crop varieties, livestock breeds and fish fingerlings; increasing the value of sustainable agricultural practices through the valuation of carbon; and broadening the agricultural production base through, for example, promoting small livestock;

⁴ The original communications are available at <<http://unfccc.int/home/items/5265.php>>, <<http://unfccc.int/home/items/5276.php>> and <<http://unfccc.int/focus/mitigation/items/7172.php>>.

(e) Risk management and insurance, including livestock and crop insurance and weather-based index insurance;

(f) Agricultural research and technology development, including participatory crop and livestock breeding; pest-, disease- and drought- and/or heat-tolerant crops; research into aquaculture and other new farming systems; research into crop, livestock, soil, water and pest/disease/weed control; and research as applied to area-specific varieties and practices;

(g) Agricultural advisory service and information systems, including strong extension services; a participatory extension approach, including farmer-to-farmer training and farmer field schools; dissemination of climate-resilient varieties of crops, technologies and practices; dissemination of seasonal climate forecasts; market and climate information systems; and information and communications technologies (ICT);

(h) Agricultural market development, including cooperatives for farm inputs and outputs; cooperative storage; infrastructure and market development; support for market information systems, including the use of ICT (mobile phones and digital pen technology); and promoting agroprocessing and value-addition and post-harvest technologies;

(i) Social protection and disaster risk management, including strengthening local and farmers' institutions and organizations; promoting microfinance schemes, including ensuring functioning financial markets and institutions; increasing the focus on risk sharing and risk reduction across the entire value chain; developing/enhancing climate information systems and early warning mechanisms; and developing/enhancing disaster risk management.

12. Secondly, information was communicated on NAMAs in the following areas of governance:

(a) Reviewing existing detrimental policies and regulations that exacerbate climate change impacts;

(b) Mainstreaming win-win adaptation and mitigation strategies and actions through appropriate incentives, including through existing national and regional frameworks and national agricultural development plans;

(c) Developing policies to ameliorate the adverse impacts of livestock production and pastoralism;

(d) Investigating financial risk management;

(e) Strengthening existing agricultural institutions and establishing new ones.

13. Thirdly, information was communicated on NAMAs relating to early action readiness to scale up best practices:

(a) National/sectoral strategy and action plans that enhance agricultural adaptation and the potential for mitigation;

(b) Increased adaptation of crops, livestock and aquacultured organisms to climate stress;

(c) Enhanced access to and utilization of technologies that enhance efficiency and productivity;

(d) Increased use of resource-conserving technologies in agronomic practices, nutrient management, water management, conservation agriculture and residue management, agroforestry, restoration and rehabilitation, livestock management, fisheries and aquaculture, and efficient energy management;

- (e) Access to credit and microfinance;
- (f) Improved risk sharing, including crop and livestock insurance and weather-based index insurance;
- (g) Agricultural advisory services and information systems, including the use of mobile telephony and digital pen technology;
- (h) Developing a national system for measurable, reportable and verifiable carbon accounting.

14. Regarding the tracking of implementation and the assessment of impact, it was communicated that actions would include the establishment of a specialized national institution responsible for measurement, reporting and verification (MRV), and the development of a national MRV system to: document greenhouse gas (GHG) emissions from agriculture; quantify emission levels under different practices; specify methodologies for the quantification of emissions; and develop tools to monitor the impacts of adaptation interventions.

15. Regarding international support, the African Group specified the need for:

(a) Technology development and transfer to support the identification, review and implementation of technological needs and to provide opportunities for technology deployment and the enhancement of technology research and development in key areas in the agriculture sector;

(b) Capacity-building for: the development, implementation and monitoring of agricultural NAMAs; the use of tools to enable accurate and full GHG accounting; the optimum use by farmers and other agricultural stakeholders of available resources and technologies; agricultural research and development in the region;

(c) Finance, stating that development partners, multilateral and other organizations, and Parties included in Annex II to the Convention should provide financial support, including for capacity-building, research and technology development and transfer, to African countries to help them to undertake and implement adaptation and mitigation actions in agriculture, in line with Article 4, paragraphs 1(c), 4 and 5, of the Convention.

Algeria

16. Algeria communicated that it has developed renewable energy management and development programmes that will enable a reduction of emissions relative to the 'business as usual' scenario.

17. The communication also stated that Algeria has already undertaken several actions to reduce emissions, such as a reduction in the flaring of gas associated with oil production, the promotion of the use of low-carbon fossil fuels and the capture and geological sequestration of carbon dioxide (CO₂).

18. Algeria also stated that the Copenhagen Accord constitutes a policy statement that can pave the way for negotiations towards a legally binding instrument that sets forth the concerns of all Parties on the basis of the fundamental principles of the Accord, in particular the principle of common but differentiated responsibility and fairness. Algeria also added that the emission reductions of Parties included in Annex I to the Convention (Annex I Parties) must be significant, given their historical responsibility, and that the Annex I Parties that are Parties to the Kyoto Protocol should be part of the second commitment period of the Kyoto Protocol. Further, the Party stated that the efforts to achieve the worldwide goal of reducing GHG emissions should be equitably borne by allowing developing countries access to atmospheric space for their social and economic development.

19. Algeria stated that NAMAs should be voluntary in nature and included in national communications. With respect to funding, Algeria stated that the Accord provides for developed country Parties to support the actions of developing countries in fighting climate change, which implies individualized commitments from developed countries, as well as the fair representation of developing countries in the international governance system for managing the funds.

Antigua and Barbuda

20. Antigua and Barbuda communicated that it would voluntarily undertake nationally appropriate, measurable and verifiable actions aimed at further reducing its already minuscule GHG emissions by 25 per cent below 1990 levels by 2020. The intention to pursue a low-carbon, green-growth development strategy during the period 2010–2015 was also stated.

21. Antigua and Barbuda recalled the relevant provisions of decisions 1/CP.15 and 1/CMP.5, which, inter alia, call for a two-track negotiating process and distinct outcomes under the Convention and its Kyoto Protocol. The Party stated that it is against this background that the Government of Antigua and Barbuda decided to communicate the information on its envisaged emissions reduction mentioned above.

22. The communication also included a request for the provision of support through the ‘fast-track financing’ scheme envisaged under paragraph 8 of the Copenhagen Accord to implement the above-mentioned low-carbon, green-growth development strategy. In addition, the Party stated that the country’s NAMAs would be undertaken on the basis of the financial and technical support provided by the international community, including through that envisaged in paragraphs 8, 10 and 11 of the Copenhagen Accord.

23. Antigua and Barbuda also communicated that, consistent with Article 12, paragraph 1(b), of the Convention, it would communicate information on the above-mentioned mitigation actions and its low-carbon, green-growth development strategy through its national communications.

Argentina

24. Argentina communicated that it is currently developing programmes and NAMAs, supported by a strong regulatory framework in the sectors of, inter alia, energy efficiency, renewable energy, biofuels, forest management and solid waste management, which are expected to have a direct and positive effect on the reduction of GHG emissions, thereby contributing to the ultimate objective of the Convention. Additional information on the Party’s sector-specific actions is provided below:

(a) Energy efficiency: Decree No. 140/07 created the National Programme for the Rational Use of Energy and Energy Efficiency, which incentivizes the rational use of electricity and natural gas through economic incentives for reducing consumption; Law No. 26473 forbids, since 31 December 2010, the commercialization of incandescent light bulbs in the country; and various national programmes have also been established, such as the Programme for Increasing Energy and Production Efficiency in Small- and Medium-sized Enterprises, the Programme for the Quality of Electric Appliances, and the Programme for Energy Saving and Energy Efficiency in Public Buildings;

(b) Renewable energy: Law No. 26190 offers subsidies for electricity generation from renewable energy resources such as wind, solar photovoltaic (PV), mini-hydro, biogas and biomass, establishing tax exemptions to incentivize investment in the sector. Under this framework, the state-owned company ENARSA (Energía Argentina S.A.) is developing wind projects with a total capacity of 500 MW, as well as the Programme for Renewable Energy for the Rural Market and Law No. 26123 for the Promotion of Hydrogen;

(c) Biofuels: the National Programme on Biofuels and Law No. 26093, which since January 2010 establishes a minimum share of 5 per cent of bioethanol and biodiesel in the gasoline and diesel oil sold in the country, provide a tax exemption and incremental prices for biofuel producers;

(d) Forest management: Law No. 26331 establishes rules for the use of land and for the rational and sustainable management of native forest and provides financial support to the provinces to compensate for potential short-term losses; Law No. 26432 promotes investment in new forest enterprises and the enlargement of existing forests;

(e) Solid waste management: the National Plan for the Integral Management of Urban Solid Waste is supported by a loan from the World Bank for the construction of sanitary landfills and landfill gas capture.

25. Argentina stated that COP 16/CMP 6 (the sixth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol) would be the next opportunity to achieve efficient and effective actions so that, in the process of transformation towards a low-carbon society, developing countries could be provided with the financial, technological and scientific means to strengthen their sustainable development processes. This, the communication continued, is the fundamental basis, in conjunction with legally binding commitments for emission reductions by developed countries, from which to advance the process at the required accelerated pace.

26. Argentina also stated that the implementation of NAMAs by developing countries will contribute to the global process of the reduction of emissions, based on the principles of common but differentiated responsibilities and according to the principles and provisions of the Convention, particularly Article 4, paragraphs 1, 7 and 8.

Armenia

27. Armenia communicated the following NAMAs:

(a) The implementation of the National Programme on Energy Saving and Renewable Energy of the Republic of Armenia (2007), which aims to:

- (i) Increase energy production from renewable sources;
- (ii) Modernize thermal power plants;
- (iii) Improve energy efficiency in all sectors of the economy;
- (iv) Improve energy efficiency in buildings and construction;
- (v) Decrease the loss of methane (CH₄) during gas transportation and from gas delivery systems;

(b) In the transport sector, expand the use of electrical transport and increase the share of natural gas in fuel used for motorized transport;

(c) Decrease CH₄ emissions from solid municipal waste and wastewater;

(d) Restore degraded forests, reduce deforestation, sustain soil CO₂ content and ensure its increase, and promote afforestation.

28. Armenia stated that its communication is made under the explicit understanding that the preamble of the Copenhagen Accord contains a reference to decision 1/CP.15, on the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), and decision 1/CMP.5, on the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), which requests the continuance of the two-track negotiating process.

Benin

29. Benin communicated the following NAMAs:

(a) The development of an urban transport system in Cotonou and greater Cotonou to reduce GHG emissions;

(b) The sustainable development of natural forests and the development of forest planting to strengthen carbon sinks;

(c) The recovery of CH₄ emitted by landfills in local communities with a special status (Cotonou and greater Cotonou, Porto-Novo and Parakou).

Bhutan

30. Bhutan communicated that, with regard to NAMAs, it already sequesters more carbon than it emits, and that the country has declared its intention to ensure that its emissions do not exceed its sequestration capacity.

31. Bhutan stated that it makes this commitment despite its status as a very vulnerable, small, landlocked least developed country (LDC) with a fragile mountainous ecosystem and numerous pressing social and economic development needs and priorities. The Party further stated that it makes this commitment because it believes that there is no greater need than the need to keep the planet safe in order to sustain life and that all Parties, large or small, can play a part in keeping the global temperature rise below 1.5 °C. While making this sincere commitment, Bhutan calls upon the global community to come forward and work towards a legally binding treaty under the guiding principles and commitments of the Convention.

32. Bhutan also communicated that, in its efforts to remain carbon-neutral and to adapt to the adverse effects of climate change, it will require the support of the international community, the details of which it will communicate at a later date.

Botswana

33. Botswana communicated that its mitigation actions will be relative to a baseline and that the baseline will be determined through capacity-building activities. The Party's NAMAs will therefore be relative reductions, or deviations, from the baseline. Botswana stated that a long-term mitigation and adaptation strategy needs to be developed to assess the country's mitigation potential in order to inform policy and specific actions to address climate change.

34. Botswana communicated that its mitigation actions will include reducing emissions from the use of petrol in the transport sector and the burning of coal and from reducing deforestation and planting forests to capture CO₂. Under the national emission reduction portfolio, projects and programmes will include a shift from coal to gas; nuclear energy; renewable energy; biomass; and carbon dioxide capture and storage (CCS). With regard to energy conservation and efficiency, national projects and programmes will target mass transport systems, buildings and low-energy appliances. The Party's NAMAs will also include sustainable development policies and measures such as:

(a) Energy efficiency programmes;

(b) Policies in the transport sector;

(c) Standards in the building sector;

(d) Minimum energy performance standards for household appliances.

35. Botswana also stated that it has a number of strategic plans and programmes aimed at reducing GHG emissions and that its mitigation actions will be either unilateral and/or

voluntary and that, in some instances, those actions may include proposed mitigation actions submitted through the Copenhagen Green Climate Fund.

36. Botswana stated that developing countries' NAMAs are voluntary and not legally binding, and that their implementation is conditional on technological, financial and capacity-building support in a measurable, reportable and verifiable manner, in line with paragraph 1(b)(ii) of the Bali Action Plan (decision 1/CP.13).

37. Botswana also stated that it is a developing country with significant development challenges relating to poverty, unemployment and high vulnerability to climate change impacts; nevertheless, it will play its part in line with the provisions of the Convention and take action in ways that are appropriate to the national circumstances. The Party added that it is and will continue to be a carbon-intensive, mainly coal-based, economy.

38. Botswana stated that it will report on its mitigation actions through national communications, consistent with Article 12, paragraph 1(b), of the Convention every two years and on the basis of the guidelines to be adopted by the COP. The Party also mentioned that it will develop domestic measurement, reporting and verification approaches, the results of which will be reported through its national communications, and that the supported NAMAs will be subject to international measurement, reporting and verification in accordance with the guidelines adopted by the COP.

Brazil

39. Brazil communicated that it anticipates its mitigation actions, listed below, to lead to an expected emissions reduction of between 36.1 per cent and 38.9 per cent below its projected emissions in 2020:

(a) A reduction in deforestation in the Amazon (range of estimated reduction: 564 Mt carbon dioxide equivalent (CO₂ eq) in 2020);

(b) A reduction in 'cerrado' deforestation (range of estimated reduction: 104 Mt CO₂ eq in 2020);

(c) A restoration of grazing land (range of estimated reduction: 83 to 104 Mt CO₂ eq in 2020);

(d) An integrated crop–livestock system (range of estimated reduction: 18 to 22 Mt CO₂ eq in 2020);

(e) No-till farming (range of estimated reduction: 16 to 20 Mt CO₂ eq in 2020);

(f) Biological nitrogen fixation (range of estimated reduction: 16 to 20 Mt CO₂ eq in 2020);

(g) Energy efficiency (range of estimated reduction: 12 to 15 Mt CO₂ eq in 2020);

(h) An increase in the use of biofuels (range of estimated reduction: 48 to 60 Mt CO₂ eq in 2020);

(i) An increase in energy supply from hydroelectric power plants (range of estimated reduction: 79 to 99 Mt CO₂ eq in 2020);

(j) Alternative energy sources (range of estimated reduction: 26 to 33 Mt CO₂ eq in 2020);

(k) Iron and steel – replacing coal from deforestation with coal from planted forests (range of estimated reduction: 8 to 10 Mt CO₂ eq in 2020).

40. Brazil stated that the envisaged domestic actions as indicated above are voluntary in nature and that they will be implemented in accordance with the principles and provisions of the Convention, particularly Article 4, paragraphs 1 and 7, Article 10, paragraph 2(a),

and Article 12, paragraphs 1(b) and 4. It also stated that the use of the clean development mechanism (CDM) established under the Kyoto Protocol would not be excluded.

41. Brazil also stated that it understands the Copenhagen Accord to be an important step in facilitating the conclusion of the on-going two-track negotiations under the AWG-KP and the AWG-LCA with a view to adopting a decision on the second commitment period of the Kyoto Protocol and also on the fulfilment of the Bali Action Plan during COP 16/CMP 6.

Burkina Faso

42. Burkina Faso communicated proposals⁵ for a framework for the development of two NAMAs: one in the rural development sector and one in the energy sector.

43. The first proposal relates to the National Rural Sector Programme, with a 2015 horizon. It takes into account and operationalizes all policies and strategies linked to rural development. It was communicated that the mitigation potential of the programme is estimated to be 9.1 Mt CO₂ eq, or 1.2 Mt CO₂ eq/year between 2008 and 2015.

44. It was mentioned that the actions to be implemented under the programme are expected to contribute to the Government's objectives of: restoring 30,000 ha/year degraded forests; increasing plantations from 68,000 to 100,000 ha/year; increasing the area of natural forests from 170,000 to 500,000 ha; reducing the area of forests burned by wildfires from 30 to 20 per cent; and training local villagers on the sustainable management of natural resources.

45. The programme consists of three main actions, the first of which relates to reforestation and forest management and has a time frame for implementation of five years. The first project involves:

- (a) Mapping the potential for creating forest/reforestation/managing existing forests;
- (b) Raising the awareness of the main stakeholders and building their technical capacity for creating forest/reforestation/managing forests;
- (c) Providing institutional support for creating forest/reforestation/managing forests and disseminating information;
- (d) Building the capacity of local villagers for income-generating activities linked to the sustainable management of forests;
- (e) Developing and testing scenarios for the registration of community forests;
- (f) Promoting techniques for improving carbon sequestration by forests;
- (g) Developing and promoting partnerships between community forests within and outside of the country;
- (h) Strengthening the capacity of local villagers and municipal councils for the establishment of communal forests;
- (i) Monitoring and evaluation, learning lessons and the dissemination of experiences.

46. A second project relates to animal waste, with a time frame for implementation of five years. It includes: actions relating to feasibility and market studies; setting up regional directorates; marketing and raising public awareness; identifying partners for

⁵ The original communication is available at http://unfccc.int/files/focus/application/pdf/nama_foc_prop_burkina_faso.pdf.

implementation; building biodigesters; and research into, and the development and standardization of, equipment.

47. The third project relates to urban waste and wastewater, with a time frame for implementation of five years. It involves: the analysis and detailed mapping of soils; building biodigesters; setting up a system for the transportation of biogas; and identifying subcontractors, among other things.

48. The Ministry of Agriculture and Hydraulic Resources will be the focal point for the action and the National Office for Water and Sanitation will be responsible for its implementation.

49. The second proposal communicated by Burkina Faso relates to the National White Book to facilitate access to energy. It was developed to achieve the objectives for 2015 of facilitating access to modern energy forms to reduce poverty and of reaching the United Nations Millennium Development Goals.

50. The mitigation potential of the second proposal is estimated to be 3.3 Mt CO₂ eq, or 0.4 Mt CO₂ eq/year for the period 2008–2015.

51. The initiative is expected to contribute to the Government's targets of: providing 75 per cent of the population with access to modern cooking facilities by 2015; providing 52 per cent of the rural population with access to employment opportunities; and providing 66 per cent of the total population with access to electricity by 2015.

52. In addition, the proposal will deliver co-benefits, including an increase in the production of agroproducts for bigger markets; the modernization of social services (health, education, water, etc.); an improvement in living conditions, particularly of women; the sustainable use of natural resources; increased carbon storage/sinks; and improved income-generating opportunities in rural areas. The proposal, with a time frame for implementation of five years, identifies three main actions:

(a) The rational use of energy, which would involve, inter alia: an energy diagnostic; the identification of energy-saving measures; establishing energy managers in relevant ministries; the identification of companies for the implementation of recommendations from energy audits; awareness-raising tools targeting households and services; monitoring and evaluation; and the dissemination of best practices;

(b) The use of solar energy for rural electrification, which would involve: the identification of potentially suitable areas; feasibility studies; the development of project proposals and tenders; setting up electricity cooperatives; monitoring and evaluation; and the dissemination of lessons learned;

(c) The rational use of firewood for cooking, which would involve, inter alia: the development of prototypes of improved wood stoves; the identification of non-governmental organizations, associations and craftsmen to implement the project; developing awareness and marketing tools for households; monitoring and evaluation; and the dissemination of lessons learned.

53. Burkina Faso communicated that, with regard to support needs, it requires capacity-building support for: conducting monitoring and evaluation; estimating GHG emission abatement; using software for monitoring operational variables; and setting up a national MRV system.

Cambodia

54. Cambodia communicated that, considering that deforestation worldwide has contributed to around 20 per cent of global GHG emissions, it has been implementing a pilot project within the framework of reducing emissions from deforestation and forest

degradation in developing countries (REDD) since 2009, as part of its responsibility in tackling climate change.

Cameroon

55. Cameroon communicated that it will undertake NAMAs through REDD and CDM projects, reforestation, and sector-specific mitigation actions developed as part of its National Mitigation Strategy.

Central African Republic

56. The Central African Republic communicated the following NAMAs:

(a) An increase in forest cover from 11 per cent in 2005 to 25 per cent in 2050 through reforestation, forest management and the Africa Forest Law Enforcement and Governance (AFLEG) process;

(b) The promotion of sustainable management and the certification of forest products;

(c) The promotion of forestry and the placing of value on village, community and private plantings;

(d) The promotion and placing of value on non-ligneous forest products;

(e) The development of REDD activities (their mitigation potential is under evaluation);

(f) The promotion of improved techniques by using nitrogen-fixing species;

(g) The multiplication and popularization of forage seed in grazing areas (Ouham, Ouham-Pendé and Nana-Mambéré);

(h) The intensification of the production of improved farming seeds by farmers;

(i) The recovery of household waste (solid and liquid) from large cities for the production of green fertilizers and energy production (biogas);

(j) A programme to design new industrial areas, taking into account optimized consumption principles and urban sprawl limitation;

(k) The implementation of a new programme for rural housing aimed at building new rural ecological villages based on energy efficiency and the use of renewable energy;

(l) The upgrading of the Bouali I, II and III hydroelectric dams;

(m) The installation of mini-hydroelectric plants with a capacity of 4 MW/unit, amounting to a total of 35 MW by 2030 at various waterfalls in the country: Toutoubou, Baidou, Nakombo-Soso, Kembé and la-Mbi;

(n) The use of improved stoves – better use of traditional types of energy in the Central African Republic;

(o) The development of 4,000 MW of wind farm capacity: 1,000 MW in 2012 with a strong mitigation potential;

(p) Controlling vehicle exhaust emissions in major urban areas;

(q) A programme for natural gas importation (butane), with the goal that 80 per cent of households will consume this new source of energy;

(r) A national campaign to raise awareness about energy saving and energy-saving light bulbs;

(s) The installation of a relay station for receiving satellite images;

- (t) The creation of a national observatory for the environment.

57. The Central African Republic stated that it has committed itself to undertake the mitigation actions listed above at the national level, in line with its socio-economic situation, but that, as an LDC, it will require financial, technological and capacity-building support in order to implement these actions.

Chad

58. Chad communicated the following NAMAs:

- (a) In the energy sector:
- (i) The promotion of renewable energies:
- The development of solar and wind energies;
 - The use of biogas and biofuel;
- (ii) Energy efficiency in urban and rural areas:
- The promotion of low-energy light bulbs;
 - The promotion of the use of energy-saving wood-burning stoves;
 - The rational use of traditional sources of energy, such as biomass;
- (b) In the forestry sector:
- (i) The strengthening of reforestation policy:
- The protection of existing forests;
 - The improvement of the management of protected areas;
 - The upkeep and protection of greenbelts around towns and villages;
 - A contribution to the creation of the Great Green Wall;
- (ii) The reduction of GHG emissions from deforestation and forest degradation (REDD-plus):
- The development of REDD-plus policy and strategy;
 - Strengthening the technical skills of project managers;
 - The development of an institutional and legal framework for implementing REDD-plus;
 - The improvement of the knowledge of populations and decision makers about REDD-plus through communication actions;
 - Mastering the funding mechanism to implement REDD-plus;
- (c) In the agriculture sector:
- (i) The multiplication and popularization of forage seed;
- (ii) The upgrading of farms;
- (iii) Composting and organic fertilizer-making;
- (d) In the transport sector:
- (i) The development of less polluting methods of transport;
- (ii) The promotion of the exploration and use of biofuels.

59. Chad stated that its NAMAs are voluntary in nature and are fully part of the sustainable development of the country. In addition, it was stated that, as an LDC, the NAMAs proposed above would require international support in terms of funding, technology transfer and capacity-building for their implementation.

Chile

60. Chile communicated that it will implement NAMAs in order to achieve a 20 per cent reduction below the 'business as usual' emissions growth trajectory in 2020, as projected from the year 2007.

61. Energy efficiency, renewable energy, and land use, land-use change and forestry (LULUCF) measures will be the main focus of Chile's NAMAs.

62. Chile stated that, in order to accomplish its objective, it will need an appropriate level of international support and that its actions will be undertaken in accordance with the provisions of Article 12, paragraphs 1(b) and 4, and Article 4, paragraph 1, of the Convention.

63. Chile also stated that, in its view, although the text of the Copenhagen Accord does not fully reflect the Party's national position in terms of the characteristics that a substantive agreement to significantly reduce GHG emissions should have, and although it is not a legally binding instrument, it considers that the Accord will facilitate the negotiations towards a new universal and legally binding agreement on climate change.

64. Chile made a second submission on 2 August 2011, providing additional information. It stated that, since its first submission, the Government of Chile has been working to identify policies and programmes that could be developed into NAMAs. The Government has made an effort to gather information on potential NAMAs and, to that end, developed a template to specify the critical information for enabling the effective implementation of such NAMAs. The information included: an analysis of the potential emission reductions; the costs of implementation; and a suggested framework for measuring, reporting and verifying the resulting emission reductions. Several ministries have started to gather the information, which is from national and international studies. Chile mentioned that it would like the information generated through the process to help it to obtain national and/or international financing for the implementation of its NAMAs.

China

65. China communicated that it will endeavour to lower its CO₂ emissions per unit of GDP by 40–45 per cent by 2020 compared with the 2005 level. It also expressed the intention to increase the share of non-fossil fuels in primary energy consumption to around 15 per cent by 2020 and to increase forest coverage by 40 million ha and forest stock volume by 1.3 billion m³ by 2020 compared with the 2005 levels.

66. China stated that the above-mentioned autonomous domestic mitigation actions are voluntary in nature and that they will be implemented in accordance with the principles and provisions of the Convention, in particular Article 4, paragraph 7. The Party also stated that its communication is made in accordance with the provisions of Article 12, paragraphs 1(b) and 4, and Article 10, paragraph 2(a), of the Convention.

Colombia

67. Colombia communicated that it is undertaking studies on its mitigation potential and on abatement cost curves for the transport, agriculture, energy, waste management and industrial sectors as part of its national strategy of low-carbon emissions development.

68. The Party communicated the following preliminary mitigation actions in three categories:

(a) Unilateral actions: Colombia will guarantee that at least 77 per cent of the total energy capacity installed by 2020 will be generated from renewable sources. These are actions that Colombia commits to undertake using its own resources, both private and public; the Party would not require any international or market-based funding;

(b) Actions with financial support:

(i) Colombia will reduce deforestation in the Colombian Amazon rainforest to zero by 2020;

(ii) Colombia will stimulate the growth of biofuel production, such as ethanol and biodiesel, without endangering the natural forests or the food security of the Colombian people, and by promoting the use of these fuels in the national market with the aim of achieving a 20 per cent share of total national fuel consumption by 2020. These are actions that Colombia is interested in undertaking and willing to do, but it lacks the necessary resources or capacity, and will therefore require financial support for their implementation;

(c) Actions related to carbon markets:

(i) Colombia supports the use of market-based mechanisms in order to contribute to GHG mitigation actions in developing countries. Colombia has made use of the existing flexibility mechanisms under the Kyoto Protocol, especially the CDM, for which Colombia has a project portfolio with an estimated annual emissions reduction potential of 17.4 Mt CO₂;

(ii) Colombia has great potential to reduce emissions from deforestation (REDD) through the protection of endangered forests and the inclusion of new protected areas in the national parks programme;

(iii) Colombia has estimated a total emissions reduction of up to 54.8 Mt CO₂ by 2020 through the implementation of the CDM in the energy, forest, industrial, transport and waste management sectors. Up to now, eight projects in Colombia have been accredited with 763,371 certified emission reduction (CER) units from activities related to wind power generation, mass transport systems and hydroelectric power generation;

(iv) Colombia will encourage commercial reforestation through the use of Forest Incentive Certificates;

(v) Colombia has great mitigation potential that could be realized through the implementation of the existing flexibility mechanisms under the Kyoto Protocol and the future mechanisms that may arise from negotiations, which would help the Party to achieve greater emission reductions by deviating from the 'business as usual' scenario.

69. The implementation of these mitigation actions could be supported by carbon market-based mechanisms. These actions include: (a) the capacity to measure, report and verify emission reductions for their subsequent sale; (b) the availability of measuring and monitoring tools (similar to CDM mechanisms); (c) the possibility of achieving the financial closure of the projects or activity programmes with the incentive of selling the emission reductions.

Congo

70. Congo communicated the following NAMAs:

(a) The promotion of the use of improved stoves;

(b) Drawing up waste management plans for major urban areas;

- (c) The construction of monitored municipal waste dumps in major urban areas;
- (d) The monitoring of vehicle exhaust emissions in major urban areas;
- (e) The creation of a national environment observatory;
- (f) The development of REDD;
- (g) The development of forestry in degraded forest areas and conducting forestry activities in dense forests;
- (h) Drawing up a national land usage map;
- (i) Setting up air pollution, water and soil quality monitoring stations;
- (j) The installation of a relay station for receiving satellite images;
- (k) The promotion of energy efficiency;
- (l) The development of hydroelectric potential;
- (m) The promotion of improvement techniques by using nitrogen-fixing species;
- (n) The promotion of sustainable forest management and the certification of forest products;
- (o) The promotion of forestry and the enhancement of village, community and private plantations;
- (p) The promotion and enhancement of non-ligneous forestry products;
- (q) The upgrading of the Djoue and Moukoukoulou hydroelectric dams;
- (r) The recovery of flared gas in oil production;
- (s) The reforestation of erosion hollows;
- (t) The promotion of jobs for youth through regeneration and the sustainable management of forest ecosystems;
- (u) The upgrading of transport, electricity distribution and drinking water infrastructure;
- (v) The training and awareness-raising of the population and economic operators in the practice of forest conservation.

71. The Congo stated that the above-mentioned actions were identified while the country is awaiting the finalization of methodological and strategic approaches as part of the implementation process of REDD, on the basis of its two national communications (base years of 1996 and 2000).

72. The Party expressed its hope that a new international climate accord would be agreed that has far-reaching goals for reducing GHG emissions and that has sufficient, secured and predictable funding to support the mitigation and adaptation efforts of developing countries.

Cook Islands

73. The Cook Islands communicated that the Government has set a policy goal for reaching 100 per cent renewable electricity by 2020, with a phased-in implementation plan that achieves 50 per cent by 2015.

74. The submission specifies that the Government will initially require 550,000 New Zealand dollars to cover the annual cost of a renewable energy technology trades training programme for eight years. These resources will also cover the costs of supporting the

development of new legal and regulatory frameworks, in particular as required for private-sector investment in renewable electricity systems.

Costa Rica

75. Costa Rica communicated that it will implement a “long-term economy-wide transformational effort to enable carbon-neutrality” that will help the country to significantly deviate from ‘business as usual’ emission scenarios from now until 2021 and beyond.

76. As a first step in this context, Costa Rica stated that it is currently in the process of identifying the most relevant sectors and concrete policies and measures that are likely to be developed as specific NAMAs following agreed guidance and due process. On a preliminary basis, efforts will focus on the following sectors:

- (a) Transport;
- (b) Energy;
- (c) Forestry;
- (d) Waste management.

77. Costa Rica stated that this initial list of sectors does not preclude the further inclusion of additional sectors or even more specific actions within sectors as the on-going process continues to provide more specific data.

78. Costa Rica also communicated that the preliminary estimates of incremental costs to implement the package of identified actions would involve a level of financing equivalent to approximately 1 per cent of annual national GDP in addition to regular projected investments. To allow immediate and up scaled action towards carbon neutrality and to fulfil the incremental costs, Costa Rica will require the support of the international community through a broad range of financial mechanisms, including international cooperation (official development assistance), grants, soft loans, private investment and climate-related market-based funding. Additional support will also be required for policy and capacity development and implementation, including the design and implementation of the appropriate financial architecture and governance requirements, as well as the additional administrative obligations that will be potentially acquired through specific NAMAs. The entire scope of the Party’s actions is of a voluntary nature and contingent upon these supporting conditions.

79. Costa Rica added that proactive bilateral and multilateral cooperation as well as the participation of development entities and markets will be critical to allow the country to expand current efforts and undertake new ones in order to meet its projected climate change goals and thus increase its contribution to global mitigation targets. Coherent and transparent national and international monitoring, reporting and verification schemes for national GHG emissions, mitigation actions and the international support provided will be implemented as required and in accordance with the UNFCCC guidelines and shall address both the effectiveness of actions as well as the support provided.

Côte d’Ivoire

80. Côte d’Ivoire communicated the following NAMAs:

- (a) In the energy sector:
 - (i) The drawing up and implementation of an action plan for the development of renewable energy, such as mini-hydroelectric, PV and biomass power plants, for decentralized electrification;
 - (ii) The popularization of the use of low-energy light bulbs;

- (iii) Undertaking actions to save energy from wood burning by promoting improved carbonization and by popularizing wood energy efficient homes;
- (iv) In the forestry and forest products sector:
- (v) Sustainably reconstitute, arrange and manage the forests on rural lands and the forests on the permanently held State-owned lands;
- (vi) The drawing up and implementation of a national plan to fight soil degradation;
- (vii) Ensuring the integrated and sustainable development of water resources;
- (b) In the agriculture sector: the development of sustainable farming;
- (c) In the transport and industrial sectors:
 - (i) Setting up an environmental monitoring system for checking air, water and soil quality;
 - (ii) Conducting awareness-raising campaigns aimed at the transport and industrial sectors for the adoption of clean production and consumption methods;
- (d) Cross-sectoral measures: the drawing up and implementation of a national strategy for the reduction of catastrophic risk.

81. Côte d'Ivoire expressed the hope that future negotiations may be successful in:

- (a) Continuing the two-track negotiation process;
- (b) Limiting the negotiation framework to the provisions of the Copenhagen Accord, the Kyoto Protocol and the Bali Road Map, thereby keeping the Kyoto Protocol in force. Developed countries must commit to significantly reducing their GHG emissions and to figures conforming to the recommendations of the Intergovernmental Panel on Climate Change (IPCC);
- (c) Creating a legally binding instrument at the end of the process of the AWG-LCA;
- (d) Substantially strengthening the volume of funding. The funding announced in the Copenhagen Accord is significantly below that required by developing countries in order to efficiently combat the effects of climate change;
- (e) Improving the governance structure of the funds in order to facilitate rapid access to them by developing countries, among other things.

82. The Party stated that the secretariat must be watchful in organizing the next negotiations so that the results below are achieved at COP 16:

- (a) An amended Kyoto Protocol with emission reduction figures to be achieved by Annex I Parties in accordance with the recommendations of the IPCC;
- (b) A legally binding instrument containing the main objectives of the Bali Road Map;
- (c) The adoption of appropriate decisions that efficiently implement the aforementioned instruments.

Dominica

83. Dominica communicated its Low-Carbon Climate-Resilient Development Strategy, which is the key platform for supporting the Government's Growth and Social Protection

