



USAID
FROM THE AMERICAN PEOPLE

USAID Workshop on EC- LEDS

April 4-6, 2011

ASAE Conference Center, 1575 I Street NW Washington, D.C. 20005

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AGENDA

Workshop on Enhancing Capacity for Low-Emission Development Strategies (EC-LEDS)

April 4-6, 2011

ASAE Conference Center, 1575 I St NW, Washington, DC

Top Line Objectives

To prepare participants to carry out and lead the EC-LEDS program in target partner countries.

- To understand the background, political and diplomatic foundations, framework, and objectives of EC-LEDS
- To describe major technical components of LEDS
- To explore how to integrate EC-LEDS into Mission Climate Change Programs
- To discuss steps for moving the initiative forward, from engagement to implementation

Day 1: Monday, April 4, 2011

Objectives

- To understand the background, political and diplomatic foundations, framework, and objectives of EC-LEDS
- To describe the major technical components of LEDS
- To discuss steps for moving the initiative forward, from engagement to implementation

8:00 a.m. – 8:30 a.m. Registration and Coffee

8:30 a.m. – 9:15 a.m.	Welcome Introductions Opening Remarks	Kit Batten (USAID/GCC Coordinator)
	<i>Relevance of EC-LEDS for CDCS process, Agency Climate Change Strategy, UNFCCC</i>	Jonathan Pershing <i>TBC</i> (State/SECC)

9:15 a.m. – 10:15 a.m.	Session 1: USG and Global Context for Low Emissions Development	<u>Moderator:</u> Kit Batten
	<i>History of EC-LEDS to date</i>	Bill Breed (USAID/EGAT)
	<i>Putting "whole of government" into practice</i>	
	<i>LEDS country selection process</i>	Julie Kunen (USAID/PPL)
	<i>Aligning budgets to support EC-LEDS</i>	
	<i>Global LEDS Coordination</i>	Alexia Kelly (State/OES)
	<i>Q&A</i>	

10:15 a.m. – 10:45 a.m. Coffee Break

10:45 a.m. – 11:45 a.m.	Session 2: The USG view on Low Emission, Climate Resilient Development Strategies <i>Defining LEDS and identifying good practices</i> <i>Relating LEDS to existing processes</i> <i>Making economic growth and development climate-resilient; Linking LEDS and Adaptation</i>	Michael Hanowsky (USAID/EGAT) John Furlow (USAID/EGAT)
	Discussion: Which partner countries have a development strategy that incorporates climate change or emissions reductions? How does your country define LEDS? Which related efforts is your mission already supporting?	
11:45 a.m. – 12:30 p.m.	Session 3: The USG EC-LEDS initiative <i>Integrating economic growth and development objectives into LEDS efforts</i> <i>EC-LEDS program objectives</i> <i>Approach for Phase I, II, and III countries</i>	Gary Linden <i>TBC</i> (USAID/EGAT) Collin Green (USAID/EGAT)
12:30 p.m. – 1:30 p.m.	Lunch	
1:30 p.m. – 2:00 p.m.	Q&A on Session 3: The USG EC-LEDS initiative	
2:00 p.m. – 3:00 p.m.	Round Table 1: Building In-Country Support for EC-LEDS <i>Initial diplomatic engagement with the partner country government and other key stakeholder groups (40 min)</i>	<u>Moderator:</u> <i>TBD</i> Alexia Kelly (State/OES) Salvador Sanchez (Mexico) Maricela Muñoz (Costa Rica)
	Discussion by table: Which ministries should be engaged in your host countries? Who from your embassy/mission would be the main interlocutor with the Government on this issue? What sensitivities and processes in your country are important to consider? (20 min)	
3:00 p.m. – 3:30 p.m.	Coffee Break	
3:30 p.m. – 5:00 p.m.	Technical Panel 1: Economic Modeling for Climate Change Policy and Analysis <i>Role of economic modeling in the policy design process</i> <i>Major categories of models</i> <i>The U.S. experience – types of models used and how these models inform the policy discussion</i> <i>Research capacity building using the MARKAL model</i> <i>Sector-specific modeling</i>	<u>Moderators:</u> David Garber (USAID/EGAT/EG) Bella Tonkonogy (EPA) Robert Ichord (USAID/E&E) Evan Notman <i>TBC</i> (USAID/EGAT) <i>TBD</i> (World Bank)
5:00 p.m. – 5:15 p.m.	Recap <i>Discuss preparation for Day 3 activity: Review National Communications(NatComs) and your country's LEDS or related Strategy</i>	

Day 2: Tuesday, April 5, 2011

Objectives

- To describe the major technical components of LEDS
- To explore how to integrate EC-LEDS into Mission Climate Change Programs
- To discuss steps for moving the initiative forward, from engagement to implementation

8:15 a.m. – 8:30 a.m. Arrival and Coffee

8:30 a.m. – 9:00 a.m. Clearing the Air

Review Day 1 and discuss lingering questions

Facilitator: Christine
Penzich (USAID/LAC)

**9:00 a.m. – 10:00 a.m. Session 4: Support for EC-LEDS and Mission
Programs: Washington-based Mechanisms and
Technical Assistance**

*EGAT methodology support and assistance
mechanisms*

Technical assistance for Mission program design

Moderator: Patrick Smith
(USAID/EGAT)

Erik Streed (USAID/EGAT)

Christine Penzich
(USAID/LAC)

Mary Melnyk (USAID/ASIA)

10:00 a.m. – 10:30 a.m. Coffee Break

**10:30 a.m. – 12:00 p.m. Technical Panel 2: Developing Inventories and
Projecting Emissions: Data Needs**

*The importance of inventories for LEDS and how they
are developed*

How governments collect and store data

Forest and Agriculture sector inventories and analysis

Applying the data to decisionmaking

Moderator:
Dan Bilello (NREL)

Mausami Desai *TBC* (EPA)

Megan O'Rourke (USDA)

Shira Yoffe (USFS)

Todd Johnson (World Bank)

**12:00 p.m. – 1:00 p.m. Lunch – Interagency Partners will sit at designated
tables to answer your questions**

TBD

**1:00 p.m. – 2:00 p.m. Round Table 2: Assessing the Lay of the Land
and Engaging Key Stakeholders**

Lessons learned from Phase I countries

Mapping the donor landscape

Assessing human and institutional capacity

Engaging stakeholders

Moderator:
Jen Leisch (USAID/EGAT)

Salvador Sanchez (Mexico)

Jay Lee (Colombia)

Howard Handler *TBC*
(Vietnam)

TBD (Bangladesh)

2:00 p.m. – 2:30 p.m.	Coffee Break	
2:30 p.m. – 4:00 p.m.	Technical Panel 3: Moving from Strategy to Action: Financing and Implementation	<u>Moderator:</u> Elmer Holt (DOE)
	<i>Coordinating with other key donors</i> <i>Integrating LEDS into national plans and budgets</i> <i>Engaging the private sector and financial institutions</i> <i>Financing options (e.g., loan guarantees)</i> <i>Monitoring and evaluating LEDS activities</i>	Nandini Harihareswara (USAID/EGAT) Bill Breed (USAID/EGAT) Todd Kirkbride (USAID/ODP) TBD (Treasury)
4:00 p.m. – 5:00 p.m.	Session 5: Programming and Reporting	Patrick Smith (USAID/EGAT)
	<i>Incorporating EC-LEDS into mission program planning and reporting processes</i> <i>Evaluation metrics and indicators (30 min)</i>	Kathryn Stratos (USAID/EGAT)
	<p>Small group discussion: Reporting on EC-LEDS (30 min)</p> <p>Review indicator templates and Mission results frameworks. What collection of indicators would demonstrate a successful engagement with partner countries on EC-LEDS? How can these indicators be consistently measured across countries?</p>	
5:00 p.m. – 5:15 p.m.	Recap	
	<i>Q&A</i>	

Day 3: Wednesday, April 6, 2011

Objective: To discuss steps for moving the initiative forward, from engagement to implementation

8:15 a.m. – 8:30 a.m. Arrival and Coffee

8:30 a.m. – 9:00 a.m. Clearing the Air

Discuss lingering questions

Facilitator: Tegan Blaine
TBC (USAID/AFR)

9:00 a.m. – 9:45 a.m. Review: EC-LEDS – from Initial Engagement to Implementation

Review key steps and identify takeaways

Facilitators:
Dan Bilello (NREL)
John Garrison (USAID/E&E)

9:45 a.m. – 11:30 a.m.

Activity

Conduct a preliminary LEDES assessment for your country, using the worksheets provided

Facilitator: Ashley Allen
(USAID/EGAT)

(with coffee break)

Advance preparation: Read through your country's most recent NatComs, any existing LEDES or related strategy, and any third party studies (e.g., World Bank low carbon growth studies) or sectoral planning studies.

11:30 a.m. – 12:30 p.m. Activity report out

12:30 p.m. – 1:30 p.m. Lunch

1:30 p.m. – 2:00 p.m. Workshop Wrap-up

Summary, conclusions and major takeaways
Workshop survey

2:00 p.m. – 5:00 p.m. "One-on-one" sessions

One 45-minute meeting on each country, to discuss priorities, concerns, pre-scoping and scoping processes, and status of mission programming

Participants have free time during this period except during their 45-minute session.



The Administrator

Dear Colleagues:

A few weeks ago, I had the opportunity to meet with the U.S. Special Envoy for Climate Change Todd Stern. We discussed the importance of the President's Global Climate Change (GCC) Initiative as a key Administrative priority.

Climate change is one of the century's greatest challenges: rising to this challenge is one of the President's highest diplomatic and development priorities. For FY 2010, the President requested, and Congress appropriated, significant new funding for targeted climate change activities. This is not an attribution of funds in other programmatic areas, but rather dedicated funding to support the Initiative's goals. The President has requested an increase in funding for FY 2011, even in this difficult budget environment. These requests will help ensure that we fulfill commitments made by the U.S. Government at the UN Climate Conference in Copenhagen, including budget pledges that the United States will do the following: (1) contribute its share of financing, approaching \$30 billion over the period of 2010-2012, to address climate change; and (2) provide \$1 billion over this period to support the reduction of emissions from deforestation and land degradation.

I want to convey to all of you the importance I place on reducing emissions and climate vulnerabilities in our partner countries, and on incorporating responsiveness to climate impacts into our overall development mission. Even if your mission will not receive dedicated FY 2010 or 2011 climate funds, I ask that you consider how climate will impact your work in such areas as food security, water, and health, and where co-benefits may exist. I ask also that you consider the emissions produced by activities implemented in those programs as part of our efforts to help partner countries plan for economic growth with reduced emissions trajectories. I seek your help in ensuring that the Agency's response to the climate challenge is a hallmark of USAID's leadership on the global stage. Specifically I seek your assistance in:

- **Helping countries plan and develop low emissions trajectories in support of economic growth.** I encourage missions to support partner countries that we are working with to develop Low Emissions Development Strategies, and to help develop the monitoring, reporting, verification, and inventory capabilities that will be essential to allow access to emerging carbon markets.

- **Helping countries take prompt, substantial action to adapt, and build resilience, to the impacts of climate change.** While many climate vulnerability assessments have been completed, we need to do more to act strategically on these assessments, work with partner countries to define their adaptation priorities, and address high priority needs.
- **Mainstreaming climate change into our development programs to ensure enduring success.** This will require strategic thinking about how climate change will impact our entire development and humanitarian portfolio, and how we will integrate our climate change activities with other USG initiatives, including the Global Health and Global Hunger, and Food Security.
- **Applying science and technology to this complex challenge, and unleashing innovation in our partner countries** to ensure economic progress in a changing world.
- **Ensuring accountability in our activities and results.** Congress and climate stakeholders are paying close attention to GCC initiative funding. How we implement our programs to support the President's priorities, as expressed in Copenhagen, will have an impact on overall USG policy, diplomatic and development goals, and future budget requests and appropriations.

Thank you for your continuing work on the front lines to ensure that the United States is a global leader in the fight against climate change.

Sincerely,

A handwritten signature in black ink, appearing to read "Rajiv Shah", written in a cursive style.

Rajiv Shah

Decision 2/CP.15

Copenhagen Accord

The Conference of the Parties,

Takes note of the Copenhagen Accord of 18 December 2009.

Copenhagen Accord

The Heads of State, Heads of Government, Ministers, and other heads of the following delegations present at the United Nations Climate Change Conference 2009 in Copenhagen:

Albania, Algeria, Armenia, Australia, Austria, Bahamas, Bangladesh, Belarus, Belgium, Benin, Bhutan, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Cambodia, Canada, Central African Republic, Chile, China, Colombia, Congo, Costa Rica, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Democratic Republic of the Congo, Denmark, Djibouti, Eritrea, Estonia, Ethiopia, European Union, Fiji, Finland, France, Gabon, Georgia, Germany, Ghana, Greece, Guatemala, Guinea, Guyana, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kiribati, Lao People's Democratic Republic, Latvia, Lesotho, Liechtenstein, Lithuania, Luxembourg, Madagascar, Malawi, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mexico, Monaco, Mongolia, Montenegro, Morocco, Namibia, Nepal, Netherlands, New Zealand, Norway, Palau, Panama, Papua New Guinea, Peru, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Rwanda, Samoa, San Marino, Senegal, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Spain, Swaziland, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Tonga, Trinidad and Tobago, Tunisia, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Uruguay and Zambia,

In pursuit of the ultimate objective of the Convention as stated in its Article 2,

Being guided by the principles and provisions of the Convention,

Noting the results of work done by the two Ad hoc Working Groups,

Endorsing decision 1/CP.15 on the Ad hoc Working Group on Long-term Cooperative Action and decision 1/CMP.5 that requests the Ad hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol to continue its work,

Have agreed on this Copenhagen Accord which is operational immediately.

1. We underline that climate change is one of the greatest challenges of our time. We emphasise our strong political will to urgently combat climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities. To achieve the ultimate objective of the Convention to stabilize greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, we shall, recognizing the scientific view that the increase in global temperature should be below 2 degrees Celsius, on the basis of equity and in the context of sustainable development, enhance our long-term cooperative action to combat climate change. We recognize the critical impacts of climate change and the potential impacts of response measures on countries particularly vulnerable to its adverse effects and stress the need to establish a comprehensive adaptation programme including international support.

2. We agree that deep cuts in global emissions are required according to science, and as documented by the IPCC Fourth Assessment Report with a view to reduce global emissions so as to hold the increase in global temperature below 2 degrees Celsius, and take action to meet this objective consistent with science and on the basis of equity. We should cooperate in achieving the peaking of global and national emissions as soon as possible, recognizing that the time frame for peaking will be longer in developing countries and bearing in mind that social and economic development and poverty

development strategy is indispensable to sustainable development.

3. Adaptation to the adverse effects of climate change and the potential impacts of response measures is a challenge faced by all countries. Enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa. We agree that developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity-building to support the implementation of adaptation action in developing countries.

4. Annex I Parties commit to implement individually or jointly the quantified economywide emissions targets for 2020, to be submitted in the format given in Appendix I by Annex I Parties to the secretariat by 31 January 2010 for compilation in an INF document. Annex I Parties that are Party to the Kyoto Protocol will thereby further strengthen the emissions reductions initiated by the Kyoto Protocol. Delivery of reductions and financing by developed countries will be measured, reported and verified in accordance with existing and any further guidelines adopted by the Conference of the Parties, and will ensure that accounting of such targets and finance is rigorous, robust and transparent.

5. Non-Annex I Parties to the Convention will implement mitigation actions, including those to be submitted to the secretariat by non-Annex I Parties in the format given in Appendix II by 31 January 2010, for compilation in an INF document, consistent with Article 4.1 and Article 4.7 and in the context of sustainable development. Least developed countries and small island developing States may undertake actions voluntarily and on the basis of support. Mitigation actions subsequently taken and envisaged by Non-Annex I Parties, including national inventory reports, shall be communicated through national communications consistent with Article 12.1(b) every two years on the basis of guidelines to be adopted by the Conference of the Parties. Those mitigation actions in national communications or otherwise communicated to the Secretariat will be added to the list in appendix II. Mitigation actions taken by Non-Annex I Parties will be subject to their domestic measurement, reporting and verification the result of which will be reported through their national communications every two years. Non-Annex I Parties will communicate information on the implementation of their actions through National Communications, with provisions for international consultations and analysis under clearly defined guidelines that will ensure that national sovereignty is respected. Nationally appropriate mitigation actions seeking international support will be recorded in a registry along with relevant technology, finance and capacity building support. Those actions supported will be added to the list in appendix II. These supported nationally appropriate mitigation actions will be subject to international measurement, reporting and verification in accordance with guidelines adopted by the Conference of the Parties.

6. We recognize the crucial role of reducing emission from deforestation and forest degradation and the need to enhance removals of greenhouse gas emission by forests and agree on the need to provide positive incentives to such actions through the immediate establishment of a mechanism including REDD-plus, to enable the mobilization of financial resources from developed countries.

7. We decide to pursue various approaches, including opportunities to use markets, to enhance the cost-effectiveness of, and to promote mitigation actions. Developing countries, especially those with low emitting economies should be provided incentives to continue to develop on a low emission pathway.

8. Scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries, in accordance with the relevant provisions of the Convention, to enable and support enhanced action on mitigation, including substantial finance to reduce emissions from deforestation and forest degradation (REDD-plus), adaptation, technology development and transfer and capacity-building, for enhanced implementation of the Convention. The collective commitment by developed countries is to provide new and additional resources, including forestry and investments through international institutions, approaching USD 30 billion for the period 2010–2012 with balanced allocation between adaptation and mitigation. Funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa. In the context of meaningful mitigation actions and transparency on implementation, developed countries commit to a goal of mobilizing jointly USD 100 billion dollars a year by 2020 to address the needs of developing countries. This funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance. New multilateral funding for adaptation will be delivered through effective and efficient fund arrangements, with a governance structure providing for equal representation of developed and developing countries. A significant portion of such funding should flow through the Copenhagen Green Climate Fund.

9. To this end, a High Level Panel will be established under the guidance of and accountable to the Conference of the Parties to study the contribution of the potential sources of revenue, including alternative sources of finance, towards meeting this goal.

10. We decide that the Copenhagen Green Climate Fund shall be established as an operating entity of the financial mechanism of the Convention to support projects, programme, policies and other activities in developing countries related to mitigation including REDD-plus, adaptation, capacity building, technology development and transfer.

11. In order to enhance action on development and transfer of technology we decide to establish a Technology Mechanism to accelerate technology development and transfer in support of action on adaptation and mitigation that will be guided by a country-driven approach and be based on national circumstances and priorities.

12. We call for an assessment of the implementation of this Accord to be completed by 2015, including in light of the Convention's ultimate objective. This would include consideration of strengthening the long-term goal referencing various matters presented by the science, including in relation to temperature rises of 1.5 degrees Celsius.

Select LEDS-related Excerpts from the Cancun Agreements

To view all decisions from COP 16:

<http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext=/CP.16#beg>

A shared vision for long-term cooperative action:

“...agrees that Parties should cooperate in achieving the peaking of global and national greenhouse gas emissions as soon as possible, recognizing that the time frame for peaking will be longer in developing countries, and bearing in mind that social and economic development and poverty eradication are the first and overriding priorities of developing countries and that a low-carbon development strategy is indispensable to sustainable development”

“Realizes that addressing climate change requires a paradigm shift towards building a low-carbon society that offers substantial opportunities and ensures continued high growth and sustainable development, based on innovative technologies and more sustainable production and consumption and lifestyles, while ensuring a just transition of the workforce that creates decent work and quality jobs;”

Nationally appropriate mitigation actions by developing country Parties:

“Developed countries should submit annual greenhouse gas inventories and inventory reports and biennial reports on their progress in achieving emission reductions, including information on mitigation actions to achieve their quantified economy-wide emission targets and emission reductions achieved, projected emissions and the provision of financial, technology and capacity-building support to developing country Parties;”

“Further decides that developed countries should develop low-carbon development strategies or plans;”

“Agrees that developing country Parties will take nationally appropriate mitigation actions in the context of sustainable development, supported and enabled by technology, financing and capacity-building, aimed at achieving a deviation in emissions relative to ‘business as usual’ emissions in 2020;”

“Encourages developing countries to develop low-carbon development strategies or plans in the context of sustainable development;”

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

“Emphasizing the importance of contributing to sustainable development, including through technology transfer and other co-benefits.”

“Aware of the need to provide incentives in support of low-emission development Strategies”

Economic and social consequences of response measure:

“Affirming that responses to climate change should be coordinated with social and economic development in an integrated manner, with a view to avoiding adverse impacts on the latter, taking fully into account the legitimate priority needs of developing country Parties for the achievement of sustained economic growth and the eradication of poverty, and the consequences for vulnerable groups, in particular women and children,”

“Recognizing the importance of avoiding or minimizing negative impacts of response measures on social and economic sectors, promoting a just transition of the workforce, the creation of decent work and quality jobs in accordance with nationally defined development priorities and strategies, and contributing to building new capacity for both production and service-related jobs in all sectors, promoting economic growth and sustainable development,”



**GOBIERNO
FEDERAL**

SEMARNAT

SPECIAL CLIMATE CHANGE PROGRAM 2009-2012 MEXICO

EXECUTIVE SUMMARY

SEDESOL

SENER

SHCP

SEGOB

SALUD

SCT

SE

SAGARPA

SRE

www.gobiernofederal.gob.mx

www.semarnat.gob.mx



Vivir Mejor

SPECIAL CLIMATE CHANGE PROGRAM 2009-2012 MEXICO

Executive summary

The Government of Mexico acknowledges that climate change represents the primary global environmental challenge of this century and that, in the medium and long-term, it represents one of the greatest threats to human development and well-being. In addition to inducing the displacement of climatic regions, more droughts, floods, intense hurricanes, glacial melting and an increase in sea level, among other effects, climate change also leads to biodiversity loss, and the deterioration of water resources and environmental services provided by ecosystems.

Tackling climate change requires the immediate development of activities that mitigate or reduce greenhouse gas (GHG) emissions, and of others aimed at adaptation or reduction of vulnerability and of risk to human life, nature, and economic development. The effectiveness of these activities increases significantly when various sectors converge in a cross-cutting, mainstreaming policy strategy.

Even though long-term mitigation goals are still under discussion in multilateral fora, to avoid irreversible risks to society and ecological systems, it may be considered necessary that global greenhouse gas emissions reach a maximum in the next ten years and then decrease to a third of their baseline scenario in the year 2050. The nature and scope of the activities and processes required to guarantee this result are equivalent to a new Industrial Revolution.

Recently, several groups of experts in the scientific, economic and social aspects of climate change have raised the possibility that the risks posed are significantly more severe than outlined in previous estimates, such that current mitigation strategies are likely to need updating in the short term.

Besides being a threat, climate change also represents an opportunity to promote sustainable human development. The activities which Mexico intends to implement to develop its mitigation and adaptation efforts entail multiple co-benefits such as energy security, cleaner, more efficient and competitive production processes, improved air quality, and the preservation of natural resources, among others. Adopting the measures envisioned would thus be highly beneficial even in the absence of the climate change challenge.

Mexico enjoys the privilege of being one of the world's most biodiverse countries. This will allow us to capitalize on those adaptation and mitigation measures involving the conservation and sustainable use of ecosystems and their environmental services, including the reduction of emissions from deforestation and forest degradation.

Over the next few years, the resilience – or capacity for recovery – of Mexico's economic, social and natural systems to climate change will depend on the social, political and programmatic initiatives put in place to reinforce and restore their integrity, while reorienting development towards sustainability. For this to be possible, industrial, communications and energy infrastructure will need to be expanded and reconfigured, primary production will need to increase, and the conservation of natural ecosystems, their biodiversity and environmental services, land use planning and the relocation of settlements in high risk areas, will all need to be given greater impetus.

The Special Climate Change Program (PECC, for its acronym in Spanish) is based on the afore-mentioned guidelines and on previous planning efforts, particularly the National Climate Change Strategy (NCCS), submitted in 2007. The PECC builds on and develops the elements contained in the Strategy.

Through the PECC, the Mexican government sets out to demonstrate that it is possible to mitigate climate change and adapt to it, without jeopardizing the development process, and even deriving some economic benefit.

Components of the Special Climate Change Program

In formulating the PECC, four essential components were considered for the development of an integrated policy to tackle climate change: Long-term vision, Mitigation, Adaptation, and Policy mainstreaming.

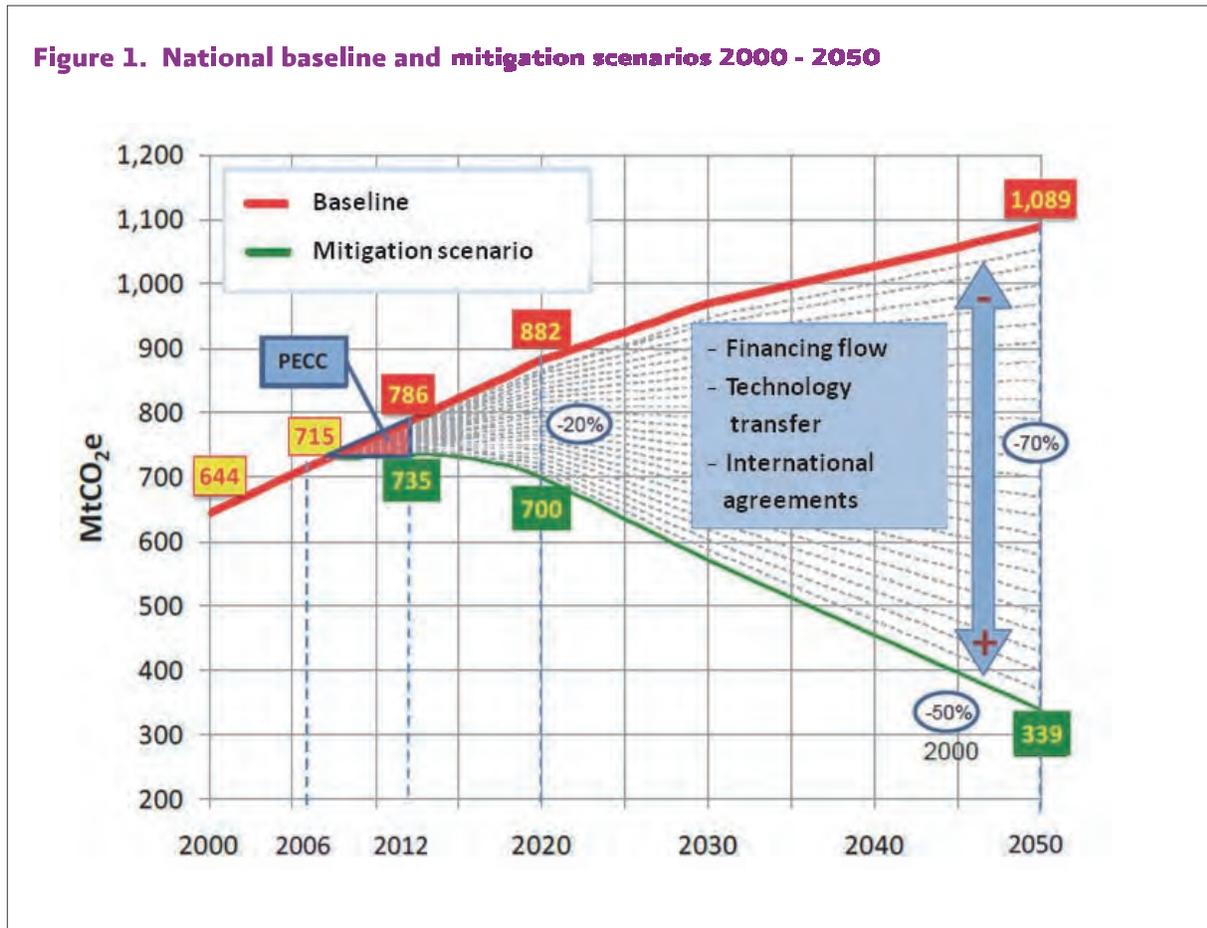
Long-term vision

The climate change process has a long-term global impact that can only be addressed with appropriate political vision for the future, essential for the planning of human activities consistent with sustainable development. Only through the convergence of the objectives of all countries in a common target for mitigation, international cooperation for making progress on adaptation, and the transformation of planning criteria towards goals and objectives that go beyond the temporary frameworks of public administration, may the challenge of climate change be successfully met in the coming decades.

Mexico sets out as an indicative or aspirational target, a reduction of 50% in its GHG emissions by 2050, compared with the volume emitted in the year 2000. In doing so, Mexico aspires to contribute to a potential stabilization of atmospheric GHG concentrations at a level not exceeding 450 parts per million of carbon dioxide equivalent (CO₂e), compatible with limiting the Earth's average temperature increase to between 2° and 3° C, and a flexible convergence towards global average per capita emissions of 2.8 tons of CO₂e, in 2050.

In this desirable trajectory towards reduction, Mexico's emissions would have to reach an inflection point in the second decade of this century, and then decrease gradually to reach the level indicated in 2050: approximately 340 million tons of CO₂e (MtCO₂e). This trajectory will very likely trace an irregular curve in time, as a result of the dynamics of the economy and the implementation of successive and increasingly complex and more expensive mitigation measures, (see Figure 1 and Table 1).

Figure 1. National baseline and mitigation scenarios 2000 - 2050



Source: National GHG Emissions Inventory 2006, Energy Sector Outlooks 2008-2017 and Environmental Outlook 2030, OECD. Analysis: Semarnat, 2009.

Mexico’s aspirational target will only be met if a multilateral regime is established which includes financial and technological support mechanisms from developed countries on an unprecedented scale. Mobilization of such support is consistent with the principle of “common but differentiated responsibilities” and its ethical rationale is grounded in the accumulated historical emissions generated by developed countries.

Table 1. National aspirational reduction targets for 2020 and 2030

Mexico's baseline [Figure 1] indicates that total country emissions will grow nearly 37% in 2020, 41% in 2030 and 70% in 2050 with respect to 2000.

	MtCO ₂ e		
	2000	2020	2030
Baseline – Business as usual (BL – BAU)	643.6	881.7	969.4
Mitigation scenario			
(50% in 2050)	643.6	700.0	571.5
Reduction with respect to 2000	—	+8.8%	-11.2%
Reduction with respect to the baseline	—	-20.6%	-41.0%

The long term mitigation scenario anticipates that Mexico will achieve a 21% reduction by 2020 and a 41% reduction by 2030, with respect to the business as usual scenario. National emissions under the same mitigation scenario will be approximately 9% above in 2020 and 11% below in 2030, with respect to the inventory for the year of reference [2000].

The mitigation effort that Mexico intends to develop requires deep transformations in production and consumption patterns, energy use, natural resource management, and in the ways that land is occupied and used.

With respect to adaptation, the vision for 2050 of this Special Program sets out three major stages: a first stage (2008 to 2012) to assess the country's vulnerability and conduct an economic evaluation of priority measures; a second stage (2013 to 2030) to strengthen the strategic adaptation capacities, and a third stage (2030 to 2050) to consolidate the capacities already built.

The first stage of vulnerability assessment and economic valuation of priority measures corresponds to the enactment of this Special Program in the 2009–2012 period, the main result of which will be the design of an integrated program of adaptation, executed progressively.

The second stage, strengthening strategic, large-scale adaptation capacities, from 2013 to 2030, includes as priorities: attaining equilibrium between degradation/deforestation and restoration/reforestation; the adoption and implementation of sustainable agriculture and livestock production systems; the eradication of measures that encourage environmental degradation and cause GHG emissions; the implementation of relocation programs for human settlements and infrastructure in high risk areas, and the implementation of policies aimed at climate stability and sustainable development.

The consolidation stage, between 2030 and 2050, will result in attaining a positive balance between reforestation and deforestation, development options that ensure environmental sustainability, and a strengthened national planning system based on criteria to decarbonize the economy and minimize vulnerability to climate change.

Mitigation

The aim of the PECC is to consolidate a development pattern in which economic growth does not impact significantly on the growth of GHG emissions. By inducing a reduction in carbon intensity, expressed as the ratio between emissions and gross domestic product, the PECC provides an initial boost to the decarbonisation of the Mexican economy.

Full implementation of the PECC could achieve a reduction in total annual emissions of 51 million tons of CO₂e in 2012, with respect to the business as usual scenario (in which emissions would rise to 786 MtCO₂e by 2012), resulting from actions carried out in the energy (generation and use), agriculture, forestry, land use, and the waste sectors.

Most of these reductions (85%) would stem from the goals and categories shown in Table 2.

Table 2. MiTigaTion goals

Goal	Categories	Executed By	Mitigation MtCO ₂ e		Cumulative	
			2008-2012	2012	To 2012 MtCO ₂ e	%
M1	Reinjection of sour gas in Cantarell	Sener	27.60	6.90	6.90	14
M82	Landfill sites with controlled methane combustion or energy generation	Sedesol, Semarnat, Local Governments	7.56	4.44	11.34	22
M64	Incorporation of 2.95 million hectares to Sustainable Forest Management	Semarnat	11.88	4.37	15.71	31
M18	Promotion of self-supply projects for electrical energy generation with renewables	Sener, Private Sector	3.65	3.65	19.36	38
M78	Pilot project of incentives for reducing emissions from deforestation and forest degradation (REDD)	Semarnat	8.97	2.99	22.34	44
M37	Energy savings through new household appliances and incandescent bulb replacement programs. "Para Vivir	Sener	4.73	2.68	25.02	49
M43	Installation of 600 thousand efficient wood burning stoves	Sedesol, Sagarpa	1.62	1.62	26.64	53
M31	Increased use of rail for freight transport	SCT	3.90	1.60	28.24	56
M66	Additional 2.175 million hectares incorporated in programs of environmental services payment	Semarnat	6.27	1.43	29.67	59
M65	Additional 2.5 million hectares of terrestrial ecosystems incorporated as Wildlife Conservation Management Units	Semarnat	4.19	1.39	31.06	61
M3	Operational efficiency in Pemex	Sener	4.96	1.24	32.30	64
M27	Construction of 38 new highways	SCT	1.20	1.20	33.50	66
M39	Green buildings and green mortgages	Infonavit	2.10	1.20	34.70	69
M15	Wind power generation by CFE	Sener	2.40	1.20	35.90	71
M67	Incorporation of 750,000 hectares of forest ecosystems as Natural Protected Areas	Semarnat	3.36	1.12	37.02	73
M11	Thermoelectric plant in Manzanillo, Colima	Sener	1.10	1.10	38.12	75
M29	Scrappage of old motor vehicles	SCT,SHCP, SE, Nafin	1.10	1.10	39.22	77
M4	Cogeneration in Pemex	Sener	3.77	0.90	40.12	79

M26	Clean highway cargo and passenger transport Program	Semarnat	2.70	0.90	41.02	81
M63	Sustainable planned grazing strategy in 5 million hectares	Sagarpa	2.05	0.84	41.87	83
M14	Hydro-electrical power project "La Yesca"	Sener	0.81	0.81	42.68	84
M73	Establishment of 170,000 hectares of commercial forestry plantations	Semarnat	1.48	0.61	43.29	85
	Other 31 goals		21.63	7.37	50.65	100

The remaining 15% of reductions expected by 2012 (7.37 MtCO₂e) will be achieved via an additional 31 goals, grouped in four emission categories: Energy production, 2.23 MtCO₂e (4.4%); Energy use, 1.57 MtCO₂e (3.1%); Agriculture, forestry and other land use, 2.55 MtCO₂e (5.0%); and Waste, 1.02 MtCO₂e (2.0%).

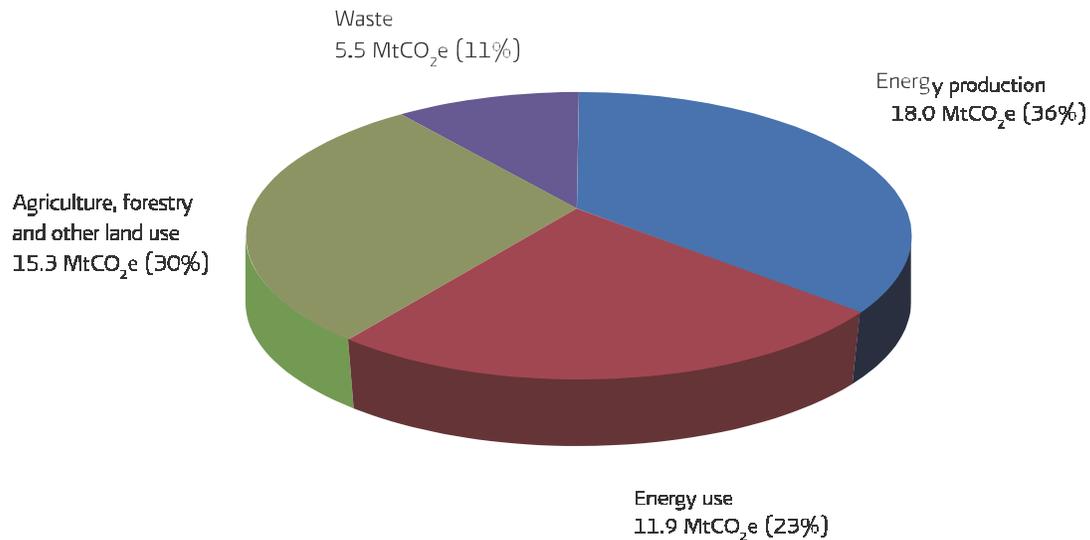
A synthesis of total reductions by category and subcategory, and the distribution by category is shown in Table 3 and Figure 2, respectively.

Table 3. Total eMissionS reductionS by caTegory aNd subcaTegory

Category	INEGEI */ (MtCO ₂ e)	Mitigation Goal (MtCO ₂ e)			
	2006	2008-2012	2012	Accumulated	
				From 2012	%
Energy Production	196.53	51.78	18.03	18.03	35.6
•Oil and Gas	84.07	40.83	10.33	10.33	20.4
•Electricity	112.46	10.95	7.70	18.03	35.6
Energy Use	233.50	22.21	11.87	29.90	59.0
•Transportation	144.63	11.35	5.74	23.77	46.9
•Residential, Commercial and Municipalities	24.88	8.80	5.53	29.30	57.8
•Industry	56.83	1.82	0.52	29.82	58.9
•Federal Public Administration		0.25	0.08	29.90	59.0
•Other use	7.16				
Agriculture, Forestry and other land use	131.56	46.46	15.29	45.19	89.2
•Agriculture	42.56	2.52	0.95	30.85	60.9
•Livestock		2.14	0.91	31.76	62.7
•Forestry	89.00	30.20	9.96	41.72	82.4
•Farming-Forest Frontier		11.60	3.48	45.19	89.2
Waste	100.42	8.58	5.46	50.65	100
•Municipal Solid Waste Disposal	53.83	7.56	4.44	49.63	98.0
•Municipal Waste Water Treatment and discharge	46.39	1.02	1.02	50.65	100
•Other wastes	0.20				
Industrial Process	53.29	-	-	-	-
Total	715.30	129.03	50.65	50.65	100

*/Preliminary data from INEGEI 2006, to be published in 2009.

Figure 2: Emission reductions in 2012: 50.7 MtCO₂e



Source: Semarnat, 2009

Adaptation

The Government of Mexico considers that efforts to adapt to climate change, focused on reducing the country's vulnerability, are a top priority. In some cases, particularly in sectors associated with land use management, adaptation measures can also contribute to mitigating GHG emissions. Addressing objectives related to strengthening the capacities of the population and their possessions, infrastructure and natural ecosystems, generates a window of opportunity for aligning public policies related to adaptation.

The need to develop an integrated risk management policy is also identified, especially for risks related to extreme hydrometeorological phenomena.

Policy mainstreaming

Assuring intersectoral and inter-institutional coordination through policy mainstreaming is essential, as is promoting actions in areas such as the economics of climate change, education, training and research, as well as information and communication.

To effectively deal with climate change, priorities must be set at the highest level of all tiers of government with regard to public policy on mitigation and adaptation, with the active participation of civil society.

This Program includes some activities on the interface of Federal Government and State or Local Government responsibility, and/or that of the private sector. It may be anticipated that mobilizing state and municip

governments, as well as civil society -particularly the private sector-, will allow the scope of the PECC to be expanded. Contributions from projects registered under the Clean Development Mechanism of the Kyoto Protocol, and the development of a national carbon market that can interact with regional markets in the near future, will also help in this regard.

In relation to foreign policy and climate change, the PECC develops and updates the criteria outlined in the National Climate Change Strategy. Given that Mexico generates only 1.6 % of global emissions, progress in national mitigation will have little global effect if it is not framed within an equitable, large-scale cooperative multilateral action, in which each country commits its best effort.

In the context of the negotiations started at the 13th Conference of the Parties, and which should culminate in the 15th Conference, to be held in Copenhagen in December 2009, Mexico continues to adopt a proactive stance, willing to build bridges of understanding to facilitate an international agreement.

The PECC represents an important step in the progress of Mexican policies on climate change. As such, it should undergo a continuous updating process to allow it to adapt to very dynamic circumstances, both in the domestic and international arenas.

Structure of the Special Climate Change Program, 2009-2012

The PECC is comprised of four chapters and three annexes.

Chapter 1 specifies the long-term vision on which the Program is based. Worldwide, political, administrative and financial systems are poorly adapted to deal with a process of such global and temporal dimensions as those inherent to climate change. The modification of several practices that usually deal only with urgent issues is required, as is the design of a new policy based on a long-term vision and on a real convergence of interests among the nations of the world, with regard to the multiple challenges posed by climate change. This chapter deals with long-term mitigation and adaptation scenarios.

Chapter 2 describes mitigation actions, that is, actions for reducing GHG emissions. It is structured around the most recent guidelines developed by the IPCC for the preparation of national emissions' inventories, stressing four broad categories or sections: energy generation¹; energy use²; agriculture, forests and other land use³; and waste⁴. The chapter has 39 objectives and 86 goals.

Chapter 3 presents public policies for adaptation to climate change. The structure of "systems" corresponds to the approach developed by Working Group II of the IPCC, which when adjusted to the specific conditions of Mexico, results in eight systems. Seven of them correspond to human and natural systems, the remainder to risk management. The chapter has 37 objectives and 142 goals on the theme of adaptation.

¹Corresponding to category 1 of the 2006 IPCC Guidelines.

²Corresponding to category 2 of the 2006 IPCC Guidelines.

³Corresponding to category 3 of the 2006 IPCC Guidelines.

⁴Corresponding to category 4 of the 2006 IPCC Guidelines.

Chapter 4 sets out and groups the fundamental elements for mainstreaming policy and action on climate change, which should support the actions proposed for mitigation and adaptation. The chapter contains five sections that deal with foreign policy, institutional strengthening, the economics of climate change, education, training, information and communication, and research and technological development. The chapter has 29 objectives and 66 goals on the theme of mainstreaming.

In all, the PECC contains 105 objectives and 294 goals.

Annexes

Annex I includes a brief summary of the fundamentals of climate change, focusing specifically on three issues: the general topic of anthropogenic climate change, the international regime, and some aspects of Mexico’s institutional framework (the structure of the Inter-Ministerial Climate Change Commission; the PECC and its relationship with the National Development Plan).

Annex II complements the list of objectives and goals outlined in chapters 2, 3, and 4 with a list of strategies, lines of action and the agencies responsible for each of the goals. It also includes a typology of these, making it possible to identify the areas where the greatest climate change efforts are concentrated.

Annex III contains a list of research proposals in matters of mitigation and adaptation to climate change, which will support the efficient implementation of this program.

List of Acronyms	
Infonavit	Institute of the National Fund for Employees’ Housing
Nafin	National Financing Development Bank
Pemex	Mexican Oil Company
Sagarpa	Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food
SCT	Ministry of Communications and Transport
Sedesol	Ministry of Social Development
Semarnat	Ministry of Environment and Natural Resources
Sener	Ministry of Energy
SHCP	Ministry of Finance and Public Credit
SRE	Ministry of Foreign Affairs

Long Term Mitigation Scenarios

Technical Summary

Prepared for:
Department of Environment Affairs and Tourism
South Africa



Prepared by:
Energy Research Centre

October 2007

The following citation should be used for this report:

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Technical Summary, Department of Environment Affairs and
Tourism, Pretoria, October 2007

The suite of reports that make up the Long Term Mitigation Scenario study include the following:

- A Long Term Mitigation Scenarios for South Africa
- B Technical Summary
- C Technical Report
- C.1 Technical Appendix
- D Process Report

The study was supported by the following inputs:

LTMS Input Report 1: Energy emissions

LTMS Input Report 2: Non-energy emissions: Agriculture, Forestry and Waste

LTMS Input Report 3: Non-energy emissions: Industrial Processes

LTMS Input Report 4: Economy-wide modeling

LTMS Input Report 5: Impacts, vulnerability and adaptation in key South African sectors

1. Introduction

The Long-Term Mitigation Scenarios (LTMS) process is mandated by Cabinet, led by the Department of Environmental Affairs & Tourism and project managed by the Energy Research Centre. The purpose is to outline different scenarios of mitigation action by South Africa, to inform long-term national policy and to provide a solid basis for our position in multi-lateral climate negotiations on a post-2012 climate regime.

LTMS has been conducted as a process involving key stakeholders, informed by the best available information. Four research teams produced information that was discussed by a Scenario Building Team (SBT) comprised of strategic thinkers from a range of government departments, key industry players and civil society. The Technical Summary provides a concise version of the technical work reviewed and accepted by the SBT.

The scenarios produced by the LTMS process are data-based scenarios. This Technical Summary therefore provides the basis, in abridged form, for the scenarios – stories of possible futures. The Scenarios together with the underlying technical work are forwarded by the SBT to high-level discussions in the first half of 2008.

2. Climate change: reasons for concern and action

Climate change and its projected impacts provide a powerful reminder of why we are engaging in the Long-Term Mitigation Scenario process in the first place. The IPCC recently concluded that significant, predominantly negative impacts on human society and its supporting agro- and natural ecosystems are projected with medium to high confidence over the course of this century, especially in Africa. The impacts study¹ conducted as part of this process reiterates the multiple impacts that South Africa will very likely face, if we and the rest of the world do not take action. It is important to point out that the approach in this study may significantly underestimate the risks of larger impacts due to the uncertainty inherent in the climate sensitivity. The climate modelling studies project a range of possible scenarios and impacts in South Africa, given the uncertainties in global greenhouse gas emissions scenarios and in the response of the climate system. Some of these projected impacts are alarming and of immediate societal relevance – for example, a projected change in available water supply and its predictability in South Africa would have major implications in most sectors of the economy, but especially for urban and agricultural demands.

In addition, the immediate health impacts of extreme climatic events on rural livelihoods, in particular, are well established and documented. Production and income activities are likely to be significantly affected by climate change and increased climate variability by ~ 2050 at least, particularly in rural areas. Similarly in urban environments, a higher risk of frequent flooding in some cases and drought induced water shortages in other areas will be the result of increased climate variability. A range of risks for natural ecosystems and associated economic sectors such as nature-based tourism and rural livelihoods is identified. These include the risk of endemic species extinctions in biodiversity hotspots, increased frequency of natural fires, and disruption to ecosystems via species geographic range shifts and the enhanced threat of alien invasive organisms.

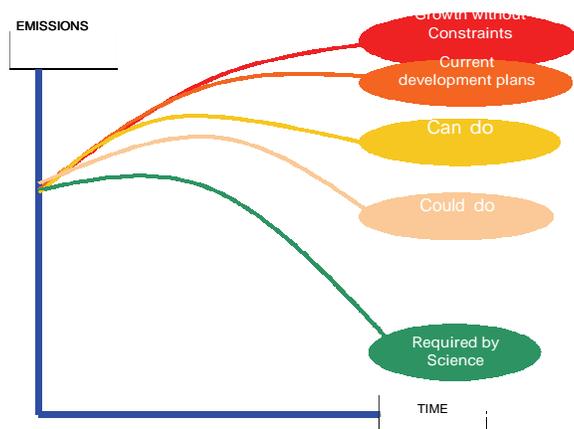
Two main types of adaptation have been suggested, namely “resilience-type” adaptation, which addresses the potentially damaging effects of changing climate extremes on sectors, and “acclimation-type” responses, which address strategies to cope with the gradual changes in background climate such as slow rates of warming that may ultimately require new behaviours and practices in human society. This distinction might allow adaptation strategies, implementing agencies and financing sources to be more effectively allocated to where needs are most urgent.

The overarching message is that the costs of inaction are very real, even if – given our current state of knowledge - they have not been comprehensively quantified in monetary terms. If we do nothing, others are likely to follow suit – and ultimately the costs of not acting exceeds those of inaction. With these messages in mind, the LTMS report focuses on mitigation, starting with the Scenario Framework.

¹ Summarised in section 1.4 of the full Technical Report. The full study is downloadable from the closed web-site www.ltms.uct.ac.za

3. Scenario framework

The SBT defined a scenario framework. The limits of the framework are defined by Growth without Constraints (GWC) and Required by Science (RBS). They define the space within which mitigation action occurs. Current Development Plans (CDP) shows what implementing existing policy would achieve, if extended into the future. In the space between GWC and RBS, several action-oriented strategies are defined. They indicate what South Africa ‘Can Do’ or ‘Could Do’. Variations on the action-oriented strategies were discussed by the SBT². First, however, the report outlines some important results from the modeling of the envelope scenarios.



4. GWC: without constraints, emissions grow

In GWC, greenhouse gas emissions are projected to rise dramatically. Without constraints, growth leads to an almost four-fold increase in greenhouse gas (GHG) emissions – from 446 million tons of CO₂-equivalent (Mt CO₂-eq)³ in 2003 to 1 640 Mt CO₂-eq by 2050.

Most of the emissions, and the largest part of the increase, comes from the energy sector. Energy-related emissions (CO₂, CH₄ and N₂O) almost quadruple by 2050. Energy emissions grow on the back of rising energy demand, particularly in the industry and transport sectors. Without constraints, energy-related emissions grow at an average 2.9% annually and reach 1 330 Mt CO₂eq in 2050, an increase of almost 1 000 Mt. Industrial process emissions add 277 Mt and non-energy 31 Mt CO₂-eq.

Electricity generation accounts for 45% of energy-related GHG emissions in 2003 declining to 34% in 2050. The declining share is due to emissions growth in liquid fuels, with five new coal-to-liquid plants, a faster rise in transport emissions, other industrial process emissions, and direct coal use in industry. Electricity continues to be generated overwhelmingly from coal and to a lesser extent nuclear power, with renewables remaining a small share of capacity and entering the mix only late. All new PF coal plants are super-critical, and a large number of Integrated Gasification Combined Cycle (IGCC) coal plants are built in GWC, in the absence of new sub-critical coal plants. Industrial process emissions (non-energy) increase more than four times in GWC. The largest share in this category is from synfuels. Emissions in the other non-energy sectors – notably waste, agriculture and forestry, increase much less rapidly than for energy.

Liquid fuel supply is dominated by oil and synfuel (coal-to-liquids, CTL) refineries, and five new crude oil refineries. The costs of bringing forward water supply options are a potential constraint, with the costs of securing a reliable supply potentially prohibitive under current economic conditions, especially when taken together with increased demand from other users. If CTL plants

² Terminology for the strategies changed considerably during the SBD process. Three strategies were finally settled on – ‘Start Now’, ‘Scale Up’ and ‘Use the Market’, in order of emissions reduction (least to most).

³ ‘Megatons’ are millions of tons, abbreviated Mt. Emission reductions from the major GHGs are converted to CO₂-equivalents by Global Warming Potentials, 21 per ton of methane, 310 per ton of nitrous oxide. Units of million tons are preferred; inventories tend to report in Gg. 1 Mt = 1000 Gg.

are built without carbon capture and storage (CCS), they massively increase emissions. Currently, emissions from CTL are the largest from a single facility, although taken together coal-fired power plants emit more GHGs. In the GWC scenario, CTL – combining both emissions from utilities and process emissions – emit on average 10% of total GWC emissions.

Current Development Plans (CDP) make some difference relative to GWC in the initial years. However, over the longer time horizon up to 2050, the difference becomes small, compared to the gap between GWC and RBS. In other words, while implementing existing government policy makes a difference, its not enough to solve the climate problem.

In plain language, if our economy grows without constraints over the next few decades, GHG emissions will continue to escalate, multiplying more than four-fold by mid-century. If the other countries (and more specifically the larger developing ones and the US) did the same, the implications are that global emissions would increase dramatically – and dangerous, if not catastrophic, climate change will very likely be upon us. The predicted impacts of climate change would be at the higher end of the projections, rather than the more cautious estimates. This would have a very serious impact on South Africa, in turn.⁴

5. Required by science

One scenario is different from all others, in that it is driven by a climate target. ‘Required by Science’ (RBS) asks what would happen if South Africa reduced emissions by the same percentage that is needed globally, i.e. -30% to -40% from 2003 levels by 2050.

They are defined by two key points – the end point (with the percentage reductions stated) and the peak (both its level and timing). The RBS reductions in 2050 are roughly half the reduction in 2100 (i.e. in half the time), based on earlier IPCC projections that stabilizing atmospheric concentrations of GHG in the atmosphere would require emission reductions of -60% to -80% from 1990 levels by 2100. Later assessments have indicated even greater reductions, but ultimately the reductions required depend on the level of stabilization of atmospheric GHG concentrations desired. In this scenario, only the emissions trajectories are sketched.

Initial analysis showed that RBS cannot be achieved with in a least-cost minimisation framework and the ‘ambitious but realistic’ limits on resources, technologies, and policies implied in that modelling context. Attempts to model a constraint on carbon emissions in the Markal framework proved infeasible, and no costs analysis is available for this scenario. The RBS climate target cannot be met using only known technologies, policies and measures with well-understood parameters, including cost. Put another way, in a carbon-constrained world, it will not be feasible to continue with growth as usual.

To indicate the level of emission reductions that would be required by science, we assume that emissions continue to increase only for a short while, peaking by 2020 at 473 Mt CO₂-eq (already slightly lower than GWC), before declining to 65% of base year levels, i.e. -35% means that emissions in 2050 are 290 Mt CO₂-eq. The highest (lowest) part of the RBS band peaks at 483 (463) Mt in 2026 (2016), before declining to -30% (-40%) or 314 (268) Mt in 2050. In other words, the later the peak, the higher the emissions level at which it peaks and the higher the emissions at the end.

The lower end of the RBS cloud can be thought of as a global or collective bottom line. The band suggests some differentiation, acknowledging that countries have different capability and national circumstances. The band of emission in the RBS scenario is narrow, compared to the gap between GWC and the whole RBS cloud.

The emissions projections for GWC and RBS are shown in Figure 1, showing the space within which solutions to climate mitigation need to be found.

⁴ A summary of the study on climate impacts, vulnerability and adaptation is included in the Technical Report; the full report is available on the LTMS web-site, www.ltms.uct.ac.za.

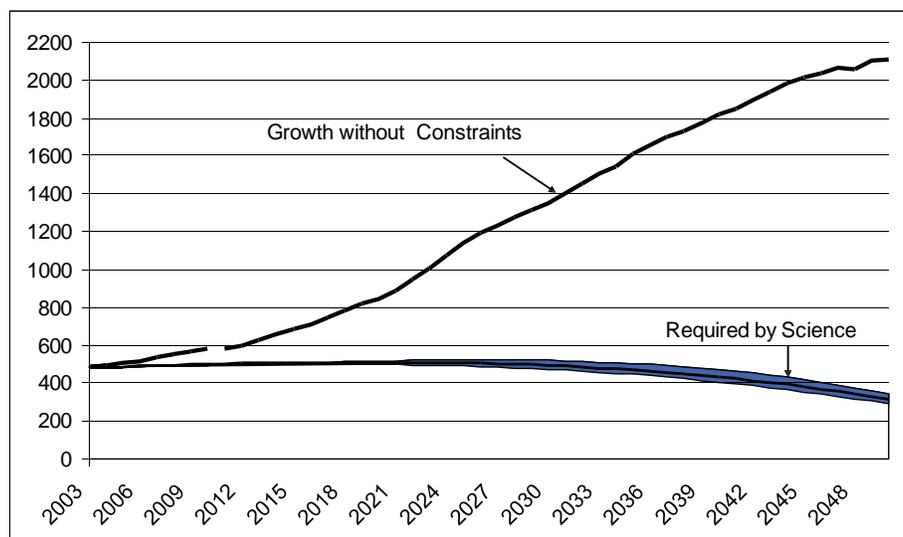


Figure 1: Emissions trajectories for GWC and RBS

6. Results for mitigation actions: the costs of wedges

Figure 1 shows a large gap between where emissions might go in a scenario of Growth without Constraints (GWC) and where the scientific information suggest they need to go. To get from GWC to RBS, action on mitigation is needed. The SBT adopted the language of ‘wedges’ to describe mitigation actions.

Wedges in the LTMS context mean emission reductions over time. If the emission reductions increase over time, the graphs have the shape of a wedge.

6.1 Initial wedges (Start Now)

A wide variety of wedges have been analysed to provide information to the LTMS process. An initial set of wedges was modelled for SBT4, which then commissioned extended actions and separate analysis of economic instruments. The initial wedges provide the basis for the Start Now strategy described in the LTMS Scenario Document, the extended wedges underpin Scale Up and Use the Market is consistent with using economic instruments. Most of the wedges are in the energy supply and use sectors -- as might be expected, given that almost 80% of our GHG emission come from that sector. Important options are reported in industrial process emissions and other non-energy sectors, notably waste, agriculture and ‘LULUCF’ (land use, land use change and forestry).

The wide variety of mitigation actions is reflected in the range of emission reductions and costs reported and summarised for comparison in Table 1. The costs of single wedges range from large savings per ton of CO₂, for example for passenger modal shifts at close to -R 1 300, positive cost options, such as almost + R 2 000 per ton of CO₂-eq for hybrids.⁵ Emission reductions in aggregate are obviously largest for combined cases, with the escalating CO₂ tax the largest reduction from a single wedge.

Energy efficiency is generally a negative cost option, i.e. the savings from reduced energy use outweigh the programme costs. Commercial (-R203 / t CO₂-eq) and residential (-R198 / t CO₂-eq) energy efficiency are more cost effective than industrial (-R34 / t CO₂-eq), but the latter provides greater absolute savings – by a factor of more than ten. Industrial energy efficiency shows savings of 4 572 Mt CO₂-eq over the period, one of the largest single wedges. Residential energy efficiency

⁵ Net negative cost options are those mitigation options, which, if implemented, would result in a lower total cost to society in the relevant sector than would have been the case in the ‘Growth Without Constraints’ scenario. Positive costs options are the opposite, i.e. the mitigation cost would result in an additional cost to society in the relevant sector. Thus, energy efficiency is most often a negative cost option, since the energy saved usually outweighs the cost of investing in more efficient technology. Similarly, renewable or nuclear energy is usually a positive cost option.

(including solar water heaters) is not only a good negative cost mitigation option, but also has important socio-economic benefits. While individual interventions are small, across a large number of households they add up avoided emissions of over 400 Mt CO₂-eq over time.

In electricity generation, cleaner coal is the smallest of the three wedges. Given that super-critical is the default new coal option and IGCC is built extensively in GWC, relatively modest emission reductions are possible here. Carbon capture and storage provides greater potential, if the challenge in scaling up storage can be achieved – a challenge also faced by synfuels and its dilute and concentrated streams of CO₂.

Other options would similarly need to scale up. This is reflected in the extension of both renewable and nuclear wedges from 27% of electricity generated to 50% of electricity generated. The wedge representing the results of a subsidy of 38 c / kWh for renewable electricity shows cumulative emission reductions that are greater than the other renewables cases (at 3 887 Mt CO₂-eq from 2003-2050), be they initial, with learning or extended. Only if one assumes technology learning and extends renewables to 50% do emissions go higher, to 3 990 Mt over the period. For renewables on its own, learning makes the difference between positive and negative cost. With technology learning, renewables become economically competitive by the end of the period with coal-fired technologies. The extended nuclear wedge is also a large wedge, with total emission reductions at 3 467 Mt CO₂-eq over the period.

In the transport sector, shifting from modes is a major infrastructure option – from private to public transport modes for passengers, and from road to rail for freight. Passenger modal shift appears, on this analysis, more attractive than freight – it is a negative cost mitigation option with reductions of 469 Mt CO₂-eq. Analysis of modal shifts includes infrastructure costs, but not a return on investment. Biofuels are reported as a separate wedge, the moderate scale of emission reductions reflecting the limits on the potential of biofuel in SA. Greater efficiency is possible in the transport sector. Promoting vehicle efficiency is a negative cost option, saving R 269 / t CO₂-eq. Even in a coal-dominated electricity grid, electric vehicles are a significant mitigation option, but only reach their full mitigation potential in a renewables- or nuclear-based grid - the results for electric vehicles show that the grid in which they operate matters.

Non-energy sectors (waste, agriculture, forestry and other land use changes) result in emissions reductions ranging from 47 to 455 Mt CO₂-eq for the period 2003-2050. While the reductions are smaller than some energy mitigation options, non-energy options provide some negative cost options (manure management, fire control and savannah thickening), but not the cheapest on offer (even ignoring transport). Also, some agricultural mitigation actions are have significant positive costs (enteric fermentation, reduced tillage, afforestation). For waste, note that the costs of flaring only are considered, at R 14 / t CO₂-eq.

The waste sector can provide substantial emission reductions at 432 Mt CO₂ .eq for the 48 year period, not including waste minimization. Reduction of fire frequency (rather than complete fire prevention) interacts with savannah thickening in that reduced fire is a major driver of thickening. Together, fire control and savannah thickening sequester carbon equivalent to 455 Mt CO₂, at a negative mitigation cost of R 15 / t CO₂-eq. Mitigation from reduced tillage is limited – firstly, the effect of putting land under reduced tillage wears off and less land is put on low-tillage over time. Hence emissions in the mitigation case converge with the baseline. Afforesting an additional 760 000 hectares of land sequester 202 Mt CO₂-eq at R 39 / t CO₂-eq.

The largest potential reduction of industrial process emissions results from carbon dioxide capture and storage (CCS) from new coal-to-liquid synfuel plants, using similar technology to the current plants at Secunda. Compared to CCS on electricity generation, CCS from the synfuel process is attractive, in that roughly half the CO₂ is in concentrated forms, avoiding most of the cost of capture. The key constraint is whether sufficient storage is available. Analysis so far has assumed 23 Mt CO₂-eq per year from synfuels could be stored at most, which on its own is more than 20 times larger than the largest existing CCS project and ten times planned. With the limit, the mitigation potential is still large at 851 Mt CO₂ -eq. over the period.

The large number of wedges analysed in the Technical Report is summarised in Table 1.

It shows all the wedges, in the energy sector, non-energy (agriculture, waste and forestry) as well as industrial process emissions. It reports the key parameters of mitigation cost (R / t CO₂-eq), the cumulative emission reductions from 2003 – 2050 and a comparative perspective on total mitigation

costs. Total mitigation costs are shown in the last two columns in relation to the size of the economy (average share of GDP) and a percentage change in total energy system costs in GWC. Table 1 also provides ranking of the actions by these two key results parameters, firstly on R / t CO₂-eq, and secondly on GHG emission reduction from 2003 to 2050. In other words, it makes clear which are the most cost-effective options and which are the ‘big hits’.

Table 1: Summary table showing mitigation cost, total emission reductions and total mitigation costs in relation to GDP and the energy system

Mitigation action	Mitigation cost (R / t CO ₂ -eq)	GHG emission reduction, Mt CO ₂ -eq, 2003-2050	Rank costs - lowest cost is no.1	Rank emission reductions - highest reduction is no.1	Mitigation costs as share of GDP	Increase on GWC energy system costs
	Average of incremental costs of mitigation action vs base case, at 10% discount rate	Positive numbers are reductions of emissions by sources or removals of emissions by sinks	Rank cost	Rank ER	%, negative numbers mean lower costs	%, negative numbers mean lower costs
Combined energy cases						
Start Now	-R 13	11,079			-0.5%	-2.2%
Scale Up	R 39	13,761			0.8%	3.6%
Use the Market	R 10	17,434			0.1%	0.6%
Current Development Plans	-R 510	3,412			-2.4%	-11.4%
Individual Wedges						
Limit on less efficient vehicles	-4,404	18	1	36	-0.2%	-0.7%
Passenger modal shift	-1,131	469	2	16	-1.1%	-4.9%
Improved vehicle efficiency	-269	758	3	14	-0.4%	-1.9%
SWH subsidy	-208	307	4	25	-0.1%	-0.4%
Commercial efficiency	-203	381	5	22	-0.1%	-0.6%
Residential efficiency	-198	430	6	21	-0.1%	-0.5%
Renewables with learning	-143	2,757	7	10	-0.4%	-2.1%
Industrial efficiency	-34	4,572	8	5	-0.3%	-1.2%
Agriculture: manure management	-19	47	9	34	n/a	n/a
Land use: fire control and savannah thickening	-15	455	10	17	0.0%	n/a
Cleaner coal	-4.8	167	11	28	0.0%	0.0%
Aluminium	0.2	29	12	35	0.0%	n/a
Renewables with learning, extended	3	3,990	13	6	0.0%	0.1%
Synfuels methane reduction	8	146	14	30	0.0%	n/a

Mitigation action	Mitigation cost (R / t CO ₂ -eq)	GHG emission reduction, Mt CO ₂ -eq, 2003-2050	Rank costs - lowest cost is no.1	Rank emission reductions - highest reduction is no.1	Mitigation costs as share of GDP	Increase on GWC energy system costs
Waste management	14	432	15	20	n/a	n/a
Nuclear	18	1,660	16	12	0.0%	0.2%
Nuclear, extended	20	3,467	17	8	0.1%	0.7%
Agriculture: reduced tillage	24	100	18	31	0.0%	n/a
Land use: afforestation	39	202	19	27	0.0%	n/a
Escalating CO ₂ tax	42	12,287	20	1	0.9%	4.3%
Agriculture: enteric fermentation	50	313	21	24	0.0%	n/a
Renewables	52	2,010	22	11	0.1%	0.6%
Nuclear and renewables, extended	52	8,297	23	2	0.8%	3.8%
Nuclear and renewables	64	5,559	24	4	0.6%	2.7%
CCS 2 Mt	67	306	25	26	0.0%	0.2%
CCS 20 Mt	72	449	26	19	0.1%	0.3%
Renewables, extended	92	3,285	27	9	0.6%	2.6%
Electric vehicles with nuclear, renewables	102	6,255	28	3	1.1%	5.1%
Synfuels CCS 23 Mt	105	851	29	13	0.1%	n/a
Subsidy for renewables	125	3,887	30	7	0.8%	3.7%
Coal mine methane reduction (50%)	346	61	31	33	0.1%	n/a
Synfuels CCS 2 Mt	476	78	32	32	0.0%	n/a
Biofuels	524	154	33	29	0.1%	0.5%
Electric vehicles in GWC grid	607	450	34	18	0.5%	2.3%
Biofuel subsidy	697	573	35	15	0.4%	2.3%
Hybrids	1,987	381	36	23	0.5%	6.3%

Three combined cases are shown – those combining initial wedges, a combination of extended wedges, and combined economic instruments, i.e. taxes and subsidies. They provide the analytical basis for three of the strategic options in the Scenario document.

A combination of initial wedges provides the basis for a strategic option (Start Now), defined in more detail in the LTMS Scenario document. It includes all the energy efficiency wedges – in industry, commerce, residential and transport sectors. These are all negative cost options, that is the initial cost required is more than outweighed by the savings on energy bills over time. Start Now also includes positive cost wedges, notably it requires that 27% of electricity is generated from each of nuclear and renewables.

6.2 Extended wedges (Scale Up)

Wedges were extended in various ways, as commissioned by SBT4. Some have been reported above as extensions of initial wedges. Another approach to extending is to combine wedges. The combined

extended wedges provide the basis for the Scale Up strategy. In this strategic option, nuclear and renewables are each required to generate 50% of electricity by 2050.

Extended nuclear and renewables are shown as a combined wedge in Table 1, that is without efficiency measures. It is so large a wedge that they might be thought of as a strategy in its own right. In that case, the approach would be to move close to zero-carbon electricity by 2050. The analysis shows that with this combination, 8 297 Mt CO₂-eq can be avoided by 2050, 173 Mt on average each year. However, emission reductions are significantly greater in the combined extended wedges with efficiency (Scale Up), more than 5 000 Mt more. And of course the cost per ton reduced is lower when the negative cost options are included.

At the request of SBT members, the research team ran two variants of the extended renewable and nuclear wedges at 80% electricity generated. These cases, while reducing emissions relative to GWC, have smaller emissions reductions than combined cases, do not diversify energy supply and the energy modeling team expressed a lack of confidence in the results. Essentially this is because the energy system is stretched beyond limits normally considered in modelling.⁶ However, the results for these cases are outlined the Technical Report.

6.3 Economic instruments (Use the Market)

Economic instruments are considered for the Use the Market strategic option. It includes an escalating CO₂ tax on the whole energy sector, together incentives for renewable electricity, solar water heating and biofuels. Taxes generate revenues, and these can be used to provide incentives. In Use the Market, for example, much greater use of solar water heaters is incentivised. Instead of setting a target for renewables (as in the other two options), the cost gap is closed by 38 c / kWh⁷ for renewable electricity.

The results for the CO₂ tax shown in Table 1 are for an escalating tax level, from R100 / t CO₂-eq to R 750 in 2050 (see the Technical Report for details). The tax as a single wedge induces emission reductions of 12 287 Mt over the period. Combined with incentives in Use the Market, an additional 5 000 Mt reductions can be achieved in Use the Market.

Considering the time profile of emission reductions, it is clear that the economic instruments have a dramatic effect in reducing the use of coal in the energy economy, at least initially. Earlier analysis modelled taxes at a range of levels. A CO₂ tax at R 1000 / t CO₂-eq, showed emission reductions of about 16 400 Mt CO₂-eq. However, it could not prevent emissions rising again towards the end of the period. After coal is reduced, the rising emissions – particularly from industry and transport, bend the emissions curve upward again. This is true for a wide range of tax levels analysed. This effect is more muted in Use the Markets, since the tax does not only affect energy supply, but there is also some response on the demand-side, with switching to gas and greater efficiency.

Overall, the combined cases show costs that move from net negative (initial wedges / Start Now at – R13 / t CO₂-eq) reducing over 11 000 Mt CO₂-eq cumulatively from 2003-2050. Extended wedges / Scale Up show a modest positive cost - Scale Up reduces almost 14 000 Mt at R39 / ton. Economic instruments / Use the Market achieve greater emission reductions (17 500 Mt) comparatively cost-effectively, at R 10 / t CO₂-eq. The treatment of tax revenues merits some discussion.

Next we examine how the combined cases and strategic options help to bridge the gap between the GWC and RBS scenarios.

⁶ For example, assumptions around the time-resolution of load factors, storage costs, cooling and availability of plants and fuel no longer hold. See the Technical Report for details.

⁷ The subsidy level of 38c was arrived at by calculating the difference between the average bulk price of electricity in South Africa (12c), and the average bulk price required to make many renewable energy technologies financially viable (50c).

7. Overviews of results

7.1 Bridging the gap between GWC and RBS

Figure 2 shows combinations – initial wedges, X-wedges and economic instruments combined. It illustrates how far they close the gap between GWC and RBS. As can be clearly seen, a gap remains in all cases by 2050.

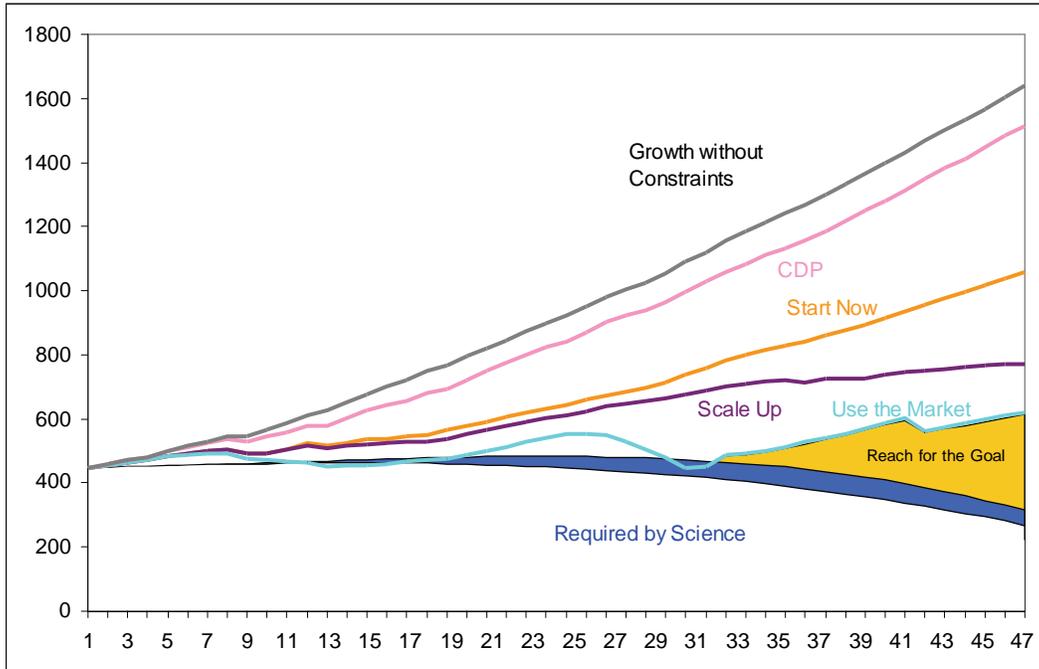


Figure 2: GWC, RBS and combined mitigation actions ⁸

The initial combined case, demonstrates that making use of all the net negative cost mitigation options allows space to include some with net positive costs. The main qualifier is that the emissions are reduced relative to the high baseline in GWC, but increase in absolute levels right up to 2050. Expressed in terms of the gap between GWC and RBS, the combined initial scenario has closed just under than half (43%) of this gap in the year 2050.

Extending the combined case with further positive cost wedges increases emission reductions, but only stabilises them from 2040 to 2050. A key difference to the initial combined case is that emission stabilise, albeit only right at the end of the period. The combined extended scenario closes the gap about tow-thirds (64%).

The combination of economic instruments is the largest wedge analysed and the only case where emissions decline below RBS.. The emission reductions are larger than 2003 annual emissions. Compared to GWC, emissions decline up to 2025, but grow again in the second half of the period. Considering the end year, 2050, the gap is closed by 76% or three-quarters.

In all cases, however, the gap between GWC and RBS is not fully closed. Combined initial or even extended wedges stay well above RBS. Fundamental reasons are that rigorous quantitative analysis relies on known technologies (and cannot model the unknown or future), and does not capture behavioural changes which may be important to emission reductions in future. Economic instruments get close to RBS, but emissions rise in the end. A ‘golden triangle’ of remaining emission reductions needs to be addressed in other ways.

⁸ The lines in Figure 2 include the emission reductions not only in the energy sector, but also in other sectors (see section 5.1 of the Technical Report)

One way is to consider future technologies and people-oriented policies. These cannot be quantified with the same rigour as the wedges presented in Table 1, at this stage. These were discussed in a meeting as part of the LTMS process and the outcomes are shown in the Process Report.

A transition to a lower-carbon economy would be another way. Instead of investing in energy-intensive sectors, which were at the heart of our economy over the twentieth century, South Africa would move towards a low-carbon economy. The possibilities of moving economic and industrial policy to favour those sectors that use less energy per unit of economic output was discussed at a meeting of eminent economists, and is discussed in the Technical Report.

7.2 Mitigation cost curve

The costs and emission reductions of most wedges are summarised in a single figure, the mitigation cost curve. Figure 3 shows such a cost curve for South Africa.

The units on the y-axis are R / t CO₂-eq, and on the x-axis Mt CO₂-eq. In other words, the height of a bar shows the cost-effectiveness of mitigation, while the width of the bar indicates how much emissions are reduced. Since there are both negative and positive cost options, the x-axis extends above and below the zero line.

Since the range of mitigation costs is wide, some of the wedges have been cut off at the top. In these cases, at the extreme right and left-hand sides of the graph, the mitigation costs has been included next to the label. 'R / t' is short for R / t CO₂-eq.

Figure 3 shows different 'break-points' as mitigation actions are arranged from lowest to highest cost. Read in this way, the mitigation cost curve suggests that wedges are grouped in four groups. A first group - from the lowest-cost wedge to reduced tillage - includes all the net negative cost wedges and some with very modest positive costs (below R 25 / t CO₂-eq). This could be called the 'efficiency plus low-cost' group. The next group starts with afforestation (costs increase to R 39 / t) up to and including CCS on electricity generation at around R 75 / t CO₂-eq. R 50 per ton at current exchange rates is less than €5 / t CO₂-eq, i.e. at the lower end of the range of prices in the carbon markets today already. The group might be given the name 'technology improvement', but it also includes the escalating CO₂ tax. The third group extended renewables, the subsidy for renewables, and electric vehicles, i.e. wedges grouped around R 100 / t CO₂-eq. The fourth group are the highest-cost options, start from coal-mine methane at R 346 / ton, rising to almost R 2000 per ton.

7.3 Mitigation cost as cumulative shares of GDP

Total mitigation costs over a 48-year period add up to substantial numbers. These numbers can be seen in relation to the size of the economy (GDP) or the energy system. These comparative figures have been reported for individual wedges in Table 1, as a ‘share of GDP’ and ‘increase on GWC energy system costs’. This gives some sense of the scale of effort required, based on the methodology outlined in section 2.2.5 of the Technical Report.

For net negative cost wedges⁹, there are overall savings and hence a negative share of GDP or benefit. Compared to the total costs of the energy system (both supply and demand side), the ratio is larger – because the overall system one is comparing to is smaller. The costing boundary is narrower. Small wedges would cost a small percentage of GDP, which is unsurprising since GDP is a large absolute amount of money. As wedges get combined into larger combined cases, and when positive cost measures are added, the share increases.

Assuming the Stern threshold of 1% of GDP level were acceptable overall costs to the South African economy, it is of interest to see where this level is crossed. We proceeded as follows:

- A set of wedges is run, starting with the most negative cost option (among the energy wedges)
- Another negative cost option is added
- Wedges continue to be added, seeking to avoid double-counting, e.g. including an initial wedge and its extended version

The results are shown in Figure 4 and the sequence of runs in the table below it. The first run (Run00) includes SUV’s, the wedge with the highest negative cost in Table 1. Run1 then adds modal shift in passenger transport, Run 2 vehicle efficiency and so on. For each successive run, the previous wedges are also included.

The results are plotted shown the ‘share of GDP’ on the y-axis and cumulative emission reductions on the x-axis. The horizontal distance between two points shows how much mitigation the combined runs have produced. As the line moves up the y-axis, it can be seen when total mitigation costs are equivalent to 1% of GDP.

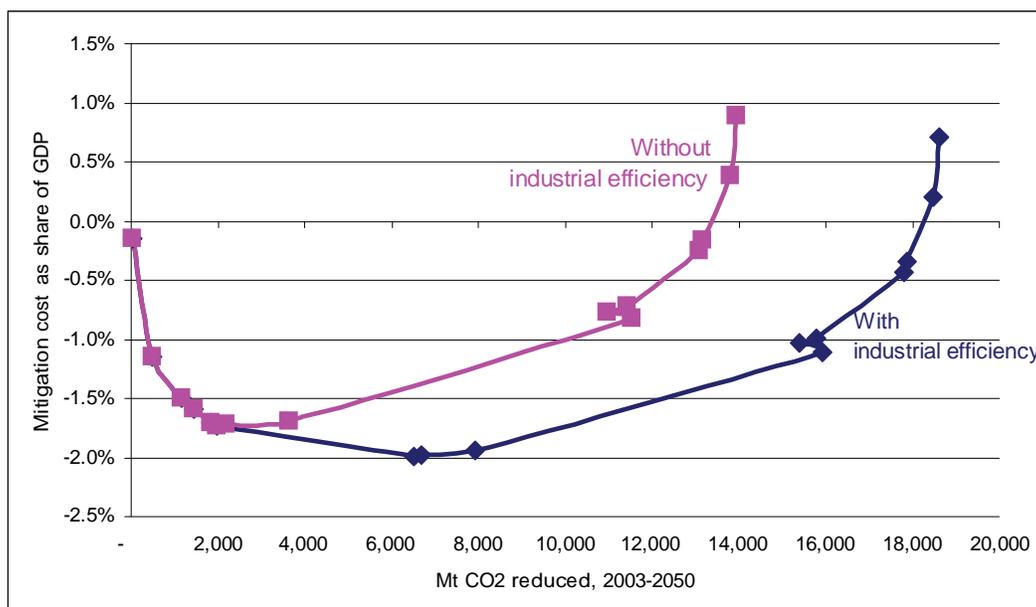
As is seen in the results, combining a set of negative cost options – mostly energy efficiency in various sectors - would make the share of GDP more negative, so that the curve initial slopes downward.

Figure 4 shows that a range of positive cost wedges, such as those in electricity generation or CCS, can be added and still remain below 0% of GDP. On their own, positive cost wedges would have total mitigation costs that are a positive percentage, when compared to economic output. But when added up cumulatively, then the total cost of the package represented by the runs is still net negative. They become positive overall when electric vehicles and hybrids (both positive cost with large reduction potential) are added in the last two runs. The sensitivity analysis shows that electric vehicles are more competitive at higher oil prices.

The results depend on the wedges chosen. This becomes clear when the industrial energy efficiency is included, or excluded – as represented in Figure 4 by the two lines. Initially, the two lines are the same as the runs are identical. From the sixth run, they diverge. Industrial energy efficiency not only drives the overall costs further into negative territory, but it also adds a large amount of emission reductions. With the big efficiency wedge, even when all the positive-cost wedges are added, the total still does not exceed expenditure equivalent to 1% of GDP.

⁹ For an explanation of negative and positive cost options, see Footnote 5.

Figure 4: Mitigation costs as share of GDP, for cumulatively combined wedges



Wedge added in this run	With industrial efficiency		Without industrial efficiency	
	Mt CO ₂ , 2003-2050	% GDP	Mt CO ₂ , 2003-2050	% GDP
Limit on less efficient vehicles	18	-0.15%	18	-0.15%
Passenger modal shift	480	-1.15%	480	-1.15%
Improved vehicle efficiency	1,157	-1.50%	1,157	-1.50%
SWH subsidy	1,462	-1.59%	1,462	-1.59%
Commercial efficiency	1,838	-1.70%	1,838	-1.70%
Residential efficiency	1,992	-1.74%	1,992	-1.74%
Industrial efficiency	6,505	-1.99%	n/a	n/a
Cleaner coal	6,683	-1.98%	2,194	-1.73%
Nuclear	7,926	-1.94%	3,659	-1.70%
Escalating CO ₂ tax	15,922	-1.11%	11,556	-0.83%
Renewables	15,408	-1.04%	10,981	-0.77%
CCS 20 Mt	15,775	-0.99%	11,434	-0.72%
Subsidy for renewables	17,803	-0.43%	13,107	-0.25%
Biofuels	17,872	-0.34%	13,175	-0.16%
Electric vehicles in GWC grid	18,493	0.20%	13,800	0.38%
Hybrids	18,629	0.71%	13,936	0.89%

8. Economy-wide implications

The economy-wide study focuses on the long run economic effects of energy efficiency in productive sectors, and changes in the energy supply fuel mix. The implications for overall economic output, jobs and income distribution are reported, given insight into the broader economic impact of efficiency wedges and those change the structure of electricity or liquid fuel supply.

Industrial energy efficiency is assessed both in terms of saving electricity or heat. Electrical efficiency can increase the wages of skilled workers rise by 0.5 and 0.7 per cent, while employment among abundant low-skilled workers rise by 0.5 per cent. For thermal savings, skilled wages increase by 0.5 and 1.1 per cent, and low-skilled employment increases by 0.3 and 0.8 per cent in the two periods.

While the small change in employment means that there are no major income distribution effects, some positive welfare effects are reported. Aggregate household expenditure levels increase across all representative household groups in the model. GDP increases only marginally by 0.4 and 0.5 per cent in 2020 when electricity is saved, up to 0.9 per cent when other fuels are saved.

The commercial sectors uses predominantly electricity and hence the focus is on electrical efficiency. Because energy makes up less of the input costs (commerce is less energy-intensive), changes in skilled wages, low-skilled employment and household expenditure levels (welfare) are all smaller than in industry, but nonetheless positive (around 0.1 and 0.2 per cent).

Overall, energy efficiency gains have small but positive overall production effects in the economy. Output and employment losses in the coal mining and electricity generation sectors are generally offset by gains in other sectors that benefit from lower production costs, resulting in unambiguously positive but small employment effects. Household welfare effects are also small but positive, with the distribution of gains depending on the type of energy efficiency modelled. Distributional effects are too small to raise great concern about the socio-economic implications.

The economy-wide analysis also considered structural changes in the energy output mix. For electricity supply, the fuel mixes of the renewables and nuclear 'ordinary wedges' are examined in the economic model. For liquid fuels, biofuels are considered.

A shift to nuclear power causes an increase in high skilled employment at the expense of a relatively large number of low-skilled jobs. The overall employment level in the economy declines marginally as a result. Even small job losses are of concern. The renewables intensive process, which is characterised by a higher labour intensity than any of the other electricity generation processes¹⁰, results in employment gains relative to the reference case. Further details on the effects of individual wedges are described in the full report (in particular, see section 13.4.2.3 of the Appendices to the Technical Report).

The overall changes in employment are small in relative terms, ranging between -0.2% and +0.2% change from the economic reference case. Where there are job losses, they would need to be off-set. Household income changes are also small and almost negligible. Given the importance of fighting unemployment, however, any changes in absolute job numbers deserve attention.

In the biofuels alternative a slightly greater reliance on biofuels is modelled, but given the small overall contribution of biofuels, even a large increase in biofuels output does little to alter trends in production and employment. A visible effect under the biofuels scenario is a slightly higher increase in agricultural output relative to the reference case. This comes at the expense of coal mining output. A biofuels scenario, as modelled here, is unlikely to have any significant economy-wide welfare implications.

The foregoing has focused on the impacts on the economy of individual wedges. The economy-wide implications of combined wedges (and the strategic options) were also considered. These impacts are described more fully in the Technical Report (section 7.2). In this Technical Summary, Table 2 provides an overview of the economy-wide results for the strategic options.

¹⁰ For a more detailed discussion of this point, including references, see the full report on economy-wide impacts in the Appendices to the Technical Report.

9. Sensitivity analysis

All model results are sensitive to variation in key input parameters. Sensitivity analysis was conducted on GDP, the discount rate and energy prices (oil, gas, coal and uranium).

The assumed GDP growth rate has significant implications for emissions. Other things being equal, greater economic growth will increase emissions. The composition of GDP – how much of it comes from primary, secondary and tertiary sectors – has major implications as well since some sectors are less emissions-intensive than others. The GDP growth rate is kept in the ASGISA range between 3% and 6% per year; but we do assume that the structure of the economy changes over time, in GWC, in line with current trends (see section 2.4.1.2 of the Technical Report).

The discount rate matters for costs results. As noted in the section on Drivers, the IPCC recommends that for long-term mitigation studies, a lower rate based ethical considerations, around 3% (IPCC 2001: 467). This study integrated sensitivity analysis on the discount rate, including the 3% value, by reporting all cost results for 15%, 10%, and 3%. As expected, a high discount rate favours mitigation actions where many of the costs are in the future, and present costs are relatively low. Conversely, a low discount rate shows lower mitigation costs for wedges with high initial costs and low ongoing costs. This would apply in cases where little money has to be spent on capital upfront, but running costs are high over time. The future operating costs are discounted. A low discount rate is favourable for wedges that have high capital costs, but low running costs, e.g. renewables.

For the sensitivity on energy prices, a key finding was that the costs associated even with large wedges can be relatively small compared to additional costs incurred because of increases in crude oil prices. A higher oil price would, for example, be comparable to the impacts of a carbon tax. Furthermore, in a world with higher coal and oil prices, mitigation costs would in fact drop as the total costs of the energy system rise. In cases where synfuel use is minimised (carbon tax), a high crude oil price increases the use of synfuels, thus raising emissions. But the most significant response is to the coal price, which reduces coal used in synfuels plants, but less so for electricity.

Additional sensitivities were run for specific wedges: the Cleaner Coal, Industrial Efficiency, Subsidy for Renewables, and Extended Nuclear and Renewables wedges were run with a higher coal price and the Improved Vehicle Efficiency, Electric Vehicles in GWC Grid, Hybrids and Passenger Modal Shift wedges were run with the higher of the two oil prices (\$150 / bbl by 2030).¹¹ No variation on the uranium price was conducted here, since the above sensitivities showed little response. The results are contained in Table 3 and Table 4. The results with existing assumptions for energy prices are included in brackets in each cell for comparison.

Table 3: Sensitivity of selected wedges to high coal prices

Numbers in brackets are with existing energy price assumptions, see text	Mitigation cost (R / t CO ₂ -eq)	GHG emission reduction, Mt CO ₂ -eq, 2003-2050	% increase on GWC costs	Mitigation costs as share of GDP
Cleaner coal	-11 (-5)	195 (167)	-0.02% (-0.01%)	-0.01% (0.00%)
Industrial efficiency	-46 (-34)	4675 (4572)	-1.70% (-1.24%)	-0.39% (-0.26%)
Subsidy for renewables	105 (125)	4590 (3887)	3.23% (3.65%)	0.73% (0.77%)
Nuclear, extended	7 (20)	3186 (3467)	0.17% (0.68%)	0.04% (0.15%)
Renewables, extended	72 (92)	3698 (3285)	2.10% (2.64%)	0.48% (0.56%)

¹¹ The oil prices for the sensitivity analysis rise to \$100 / bbl and \$150 / bbl respectively in 2030 and are extrapolated beyond. Gas prices vary with oil prices. The coal price is increased at the same rate, in relation to the coal price in the GWC reference case. For details, see the Technical Report, section 8.2.

Table 4: Sensitivity of selected wedges to high oil and gas prices

Numbers in brackets are with existing energy price assumptions, see text	Mitigation cost (R / t CO ₂ -eq)	GHG emission reduction, Mt CO ₂ -eq, 2003-2050	% increase on GWC costs	Mitigation costs as share of GDP (%)
Improved vehicle efficiency	-720 (-269)	758 (758)	-3.86% (-1.90%)	-1.19% (-0.41%)
Electric vehicles in GWC grid	-997 (607)	471 (450)	-3.30% (2.27%)	-1.02% (0.48%)
Hybrids	1244 (1987)	371 (381)	2.56% (6.27%)	0.74% (0.52%)
Passenger modal shift	-1907 (-1131)	456 (469)	-5.86% (-4.89%)	-1.79% (-1.05%)

As with the sensitivity analysis above, the general trend is for mitigation costs to drop, due to the increased fuel costs in the higher-priced GWC. The most startling result is for electric vehicles, which switch from quite a high positive cost to a large negative cost with a high crude oil price, due to avoided consumption of crude oil products. The impact on mitigation is more equivocal, with small fluctuations in both directions.

More details on the sensitivity analysis are reported in section 8 of the Technical Report.



FACT SHEET

Enhancing Capacity for Low Emission Development Strategies

Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) is a U.S. Government initiative to support developing countries' efforts to pursue long-term, transformative development and accelerate sustainable, climate-resilient economic growth while slowing the growth of greenhouse gas emissions. The initiative will build capacities in partner countries, provide targeted technical assistance, and build a shared global knowledge base on LEDS. This program is country-driven; support for creating and implementing a LEDS will be tailored to each country's unique capacity, technical, analytical, and policy needs.

Low Emission Development Strategies

A Low Emission Development Strategy (LEDS) is a strategic framework that articulates concrete actions, policies, programs and implementation plans to advance economic growth, improve environmental management, and meet development objectives. This framework provides a foundation for achieving long-term, measurable greenhouse gas emission reductions as compared to a business-as-usual development pathway.

The following elements form a general framework that illustrates the U.S. perspective on LEDS:

- A country's integrated development goals and objectives, national greenhouse gas inventory, and economic and resource data
- Long-term projections of business-as-usual economic growth and greenhouse gas emission pathways
- Alternative development scenarios that achieve economic and development goals, slow the growth rate of GHG emissions and support climate change resilience
- A set of prioritized policies, programs and measures – identified through broad stakeholder engagement – that are necessary to achieve the low emission development pathway
- Domestic implementation plans that include strategies for attracting private sector investment and channeling international support from a range of sources and appropriate partners necessary to facilitate implementation

U.S. Government Support for country-developed LEDS

1. Provide Targeted Technical Assistance for LEDS Development and Implementation

The U.S. will work with each partner country, including key stakeholders, to respond to its unique needs and priorities through targeted technical assistance and support to help partner countries:

- Enhance and strengthen existing strategies, plans and supporting processes to ensure they are robust, transparent and actionable
- Work with both government and civil society partners to strengthen in-country human and institutional capacity, and provide tools and approaches to assist with LEDS management, revision, and implementation
- Identify key policies, programs and financing sources and assist with designing policies and implementation plans that will promote climate-resilient economies and lead to lower-emission futures in key sectors and areas of the economy

The EC-LEDS program supports and enhances country development programs, plans, and policies and will complement efforts of other international donors.

2. Build a Shared Knowledge Base on LEDS

A key priority for the U.S. is to build the long-term capacity for all partner countries to own, manage, improve and guide implementation of LEDS. The U.S. will collaborate with governments, stakeholders, practitioners and the international donor community to facilitate the exchange of experience, best practices, data, and results. An initial product of this effort is a new LEDS web portal, available at <http://openEI.org/LEDS>, which provides customized search capability of more than 1,000 tools, programs, and resources.

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HOJA INFORMATIVA

Mejoramiento de capacidad para estrategias de desarrollo con baja emisión de carbono

El mejoramiento de la capacidad para las estrategias de desarrollo con baja emisión de carbono (EC-LEDS por su sigla en inglés) es una iniciativa del Gobierno de EE. UU. para apoyar los esfuerzos de los países en desarrollo a lograr un desarrollo transformativo a largo plazo, y acelerar el crecimiento económico sostenible y resistente al clima, a la vez que se desacelera el crecimiento de las emisiones de gases de efecto invernadero. La iniciativa creará capacidades en los países socios, prestará asistencia técnica específica, y construirá una base compartida de conocimientos mundiales sobre los indicadores de las LEDS. Éste es un programa impulsado por los países; el respaldo para la creación e implementación de las LEDS se adaptará a las necesidades de capacidad, técnicas, analíticas y de política únicas a cada país.

Estrategias de desarrollo con baja emisión de carbono

Una estrategia de desarrollo con baja emisión de carbono (LEDS) es un marco estratégico que articula acciones concretas, políticas, programas y planes de implementación para promover el crecimiento económico, mejorar la gestión ambiental, y cumplir con los objetivos de desarrollo. Este marco proporciona una base para lograr reducciones perceptibles y a largo plazo de los gases de efecto invernadero, en comparación a una vía normal de desarrollo.

Los siguientes elementos forman un marco general que ilustra la perspectiva de EE. UU. sobre las LEDS:

- Los objetivos y metas de desarrollo integrados de un país, el inventario nacional de gases de efecto invernadero, y datos económico y de recursos
- Proyecciones a largo plazo del crecimiento económico normal y vías de emisión de gases de invernadero
- Escenarios de un desarrollo alternativo que alcancen metas económicas y de desarrollo, desaceleren la tasa de crecimiento de las emisiones GHG (su sigla en inglés) y respalden la resiliencia del cambio climático
- Un conjunto de políticas, programas y medidas prioritarias – identificadas a través de un fuerte compromiso de las partes interesadas - necesarias para lograr el camino al desarrollo de la baja emisión de carbono
- Planes internos de implementación que incluyan estrategias para atraer la inversión del sector privado y la canalización del respaldo internacional de una gama de recursos y socios necesarios para facilitar la implementación

Respaldo del Gobierno de EE. UU. a las LEDS desarrolladas por los países

1. Prestar asistencia técnica específica para el desarrollo e implementación de las LEDS

EE. UU. trabajará con cada país socio, incluyendo los más interesados, para atender a sus prioridades y necesidades individuales por medio de la asistencia técnica específica y el apoyo para ayudar a los países socios a:

- Mejorar y fortalecer las estrategias, planes y procesos de respaldo existentes para asegurarse que sean fuerte, transparentes y procesables
- Trabajar tanto con el Estado como con la sociedad civil para fortalecer la capacidad humana e institucional interna del país; y proporcionar herramientas y enfoques para ayudar en la gestión, la revisión y la implementación de las LEDS
- Identificar las principales políticas, programas y fuentes de financiamiento y ayudar a diseñar políticas y planes de implementación que fomenten economías resistentes al clima y conlleven a futuros más bajos en emisión de gases dentro de los sectores y áreas claves de la economía

El programa EC-LEDS apoya y mejora los programas, planes y políticas de desarrollo del país, y complementará los esfuerzos de otros donantes internacionales.

2. Crear una base compartida de conocimiento sobre las LEDS

Una de las principales prioridades de EE. UU. es la creación de una capacidad a largo plazo para que los países socios puedan poseer, manejar, mejorar y guiar la implementación de las LEDS. Estados Unidos colaborará con los Gobiernos, las partes interesadas, los profesionales y la comunidad donante internacional para facilitar el intercambio de experiencias, mejores prácticas, datos, y resultados. Un producto inicial de este esfuerzo es el nuevo portal Web de las LEDS, disponible en <http://openi.org/LEDS>, el cual ofrece la posibilidad de realizar búsquedas personalizadas de más de 1.000 herramientas, programas y recursos.

Para mayor información, contactar a:

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Selection of Target Partner Countries for Low Emission Development Strategies

Yates, Michael (EGAT/AA) [myates@usaid.gov]

Dear Colleagues,

As you may know, working in close coordination with regional bureaus and field staff, we have finalized the selection of approximately 20 countries with whom the USG would like to partner for the Enhancing Capacity for Low Emission Development Strategy (EC-LEDS) initiative. We are pleased to inform you that your host country is among those selected. To determine the final list of target partner countries, we worked closely with the State Department Special Envoy for Climate Change Office and regional bureau colleagues to weigh factors including mitigation potential, market potential, political will, diplomatic priorities, national policies and context, and potential for achieving results.

We are truly enthusiastic about EC-LEDS and hope that you are as well. EC-LEDS represents an excellent opportunity for USAID to take a leading role in bringing to bear the expertise and experience of USG agencies to complement that of our developing country counterparts. The Special Envoy as well as USAID leadership see EC-LEDS as a diplomatic and development priority, and part of our commitment to address global climate change. Low emission economic development is emphasized in both the Copenhagen Accord and Cancun Agreement.

In order to make this effort a success, we need your leadership and support. In his [letter to mission leadership](#) in April, Administrator Shah conveyed the importance of incorporating climate change into USAID's overall development mission, and asked for your assistance to help countries develop low emission development strategies that promote economic growth. (See attached fact sheet for more detail on EC-LEDS). While the Special Envoy's Office and USAID team in Washington have begun the initial EC-LEDS work, moving forward it will be USAID field missions and U.S. embassies leading the coordination with partner country governments, and USAID missions driving to effectively implement the initiative and achieve lasting results. Ultimately, this process must be host-country owned and driven, with USAID missions coordinating targeted technical and analytical assistance to build upon the efforts of partner countries and other donor organizations that are already underway.

Reflecting the priority placed on EC-LEDS, we are working to realign the FY11 GCC budget allocations and FY12 request to sufficiently support implementation of this effort. USAID has committed to OMB to implement EC-LEDS in 20 countries by 2013. Missions in these countries have received special consideration in the budget realignment process.

Attached is a list of the selected EC-LEDS partner countries. Our EC-LEDS Support Team in Washington has already begun reaching out to missions in countries on this list, and has initiated work in Vietnam, Bangladesh, Colombia, and Mexico. The team is developing messaging and guidance documents and is organizing a Washington, DC-based workshop for field staff in April or May of this year. We urge you to support your staff to engage in this important effort, participate in the workshop, and work with the LEDS team closely over the coming months. We appreciate your participation in this effort and look forward to your engagement with the larger interagency EC-LEDS team. In the meantime, we are here to answer your questions – please contact Collin Green (cgreen@usaid.gov) or Ashley Allen (asallen@usaid.gov).

In addition, we are pleased to add that a notice will be going out shortly to announce the appointment of Dr. Katherine (Kit) Batten as the Agency's Global Climate Change Coordinator. Kit will serve as USAID's lead for the President's Global Climate Change Initiative and coordinate USAID climate change activities, including EC-LEDS.

Sincerely,

Maura O'Neill, USAID Senior Counselor for Innovations

and

Michael Yates, EGAT Senior Deputy Assistant Administrator

Enhancing Capacity for Low Emission Development Strategies: Target Partner Country List

Phase 1: Currently underway
Mexico**
India**
Bangladesh
Colombia
Vietnam
Gabon (covered by USAID Central Africa Regional)
Phase 2
Philippines
Ukraine
Kenya
Georgia
Peru
Jordan
Eurasia Regional
Phase 3
Kazakhstan
Zambia
Guatemala
Ghana
Cambodia
Special Partners
Indonesia
Brazil
South Africa
Costa Rica (covered by State/OES)
**special partners include Mexico and India (see phase 1)

(Excerpt from communication to OMB in January, 2011)

Consolidated USAID FY 2010 GCC pillar funding definitions, criteria, and examples

March 2, 2010

This document combines the content of previously issued documents on GCC funding definitions to provide a consolidated presentation of programming priorities and directions for core GCC funds. The document begins with the official GCC Sub-Key Issue Definitions that were part of Annex 9 to the FY 2010 Operational Plan Guidance issued on January 16, 2010. This is augmented by “Supplementary Explanations” providing pillar definitions, criteria, and examples. The supplementary explanations were developed through a consultative process with pillar and regional Bureaus, and State Department.

I. Annex 9, FY 2010 Operational Plan Guidance: GCC Sub-Key Issue Definitions

The following is a direct quote of the OP Guidance:

“Global Climate Change (GCC) itself is **not** a Key Issue. There are three Sub-Key Issues that may be selected for reporting.

Important: While we encourage programming that integrates adaptation and mitigation, for budget purposes, a single GCC Sub-Key Issue must be chosen. The Biodiversity Key Issue can also be counted as **Indirect** under the GCC Sub-Key Issues where applicable. However, Biodiversity and **Focused** GCC funds are mutually exclusive, and therefore funds **may not** be counted multiple times among these Sub-Key Issues and Key Issue.

The definitions that follow here will be supplemented with guidance to clarify the usage and criteria for GCC Sub-Key Issues:

Adaptation* - Adapting to the negative impacts of climate change. The goal of activities in this Sub-Key Issue is to build adaptive capacity in regions and countries affected by the negative impacts of climate change. Activities that support adaptation programs should have conducted a climate vulnerability and adaptation analysis building on existing analyses and assessments and be addressing needs identified through that analysis. Eligible activities also include conducting vulnerability and adaptation analyses, and building capacity to do those analyses. The Adaptation Guidance Manual developed by USAID provides information on what is involved in these analyses.

Clean Energy* - Reduced net greenhouse gas emissions (GHG) from the energy sector, industry, and urban areas. Activities in this Sub-Key Issue should be developed with the goal of achieving significant reductions in GHG trajectories over time. Clean Energy activities may fit the criteria for the Energy Poverty and Security Key Issue, and should also be reported under that category where applicable.

Sustainable Landscapes* - Reduced net GHG emissions from the land use sector. The goal of activities in this Sub-Key Issue is to assist countries to reduce GHG emissions and enhance sequestration of carbon associated with land use and management, including forestry. FY10 congressional language indicates that priority should be given to programs that “expand activities that reduce emissions from tropical forest destruction and degradation (commonly called REDD) in order to avoid the worst effects of global climate change. USAID should increase support for programs that assist developing countries in building their institutional and governance capacity to manage forest resources in a manner that demonstrates measurable, reportable and verifiable emissions reductions; develops strong forest governance laws; and improves law enforcement against illegal logging. These programs should be transparent and should respect the rights of indigenous and forest-dependent people, who should be consulted and included in the design and implementation of programs.”

The GCC Sub-Key Issues respond to a Congressional earmark and Administration Initiative, and **must be chosen for any activity or part of activity that receives climate change funds**. A GCC program or activity must meet these criteria:

- The narrative should cite whether the GCC funding is "Focused" or "Indirect." Programs that receive focused funding (i.e., are not attributed to any other earmark) should address the Administration's priorities of helping developing countries achieve climate resilient and low emissions development through support for creation and implementation of national strategic plans on climate change, emissions inventories, carbon market readiness, and targeted field demonstration activities. The Agency may issue further detailed guidance on these priorities.
- The program or activity explicitly seeks climate change-related outcomes in the form of a GCC objective.
- The program or activity is monitoring its impact on addressing climate change using one or more GCC indicators, at least one of which must be a USAID standard GCC Indicator. Programs with field level activities and impacts must report estimated CO2 emissions reductions and sequestration."

II. General supplementary explanation for all GCC pillars

A. Copenhagen Accord and USG supported countries

The Copenhagen Accord included an overall pledge of \$30 billion between 2010 and 2012 by donor countries under the U.N. Framework Convention on Climate Change. USAID's programs and activities addressing global climate change will be counted as part of the US contribution to the \$30B pledge. This means these activities will likely be subject to significant review at the international level to ensure that they are directed toward real and significant climate benefits.

Because this funding is tied to the Accord, USAID's GCC programming should be used to support those countries who have associated themselves with the Accord. Many countries have already sent in formal letters to the UNFCCC indicating their support of the Accord. Many other countries have not yet indicated whether they will sign the Accord, and a few have already definitively rejected the Accord. The White House has communicated to USAID that the USG will not provide climate change assistance to countries that have rejected the Accord. Please contact the EGAT GCC Team if you have questions about your country's status.

It is imperative that we encourage our partner countries to formally indicate their support of the Accord as soon as possible because FY11 GCC funding will only be provided if they have signed the Accord.

B. GCC pillar allocations and appropriate use

Funds allocated for a particular pillar must be used for that purpose. If a Mission has received Clean Energy funds, it can not use those to implement a Sustainable Landscapes program. GCC funds were allocated by the US Congress according to the three pillars, so if a Mission wishes to do some thing else, they must work with their Regional Bureau in Washington to swap funds with another Operating Unit. Countries were allocated funds in particular pillars because of political and country circumstances, so exchanging for another pillar may not be appropriate. The only exception to this rule is for use of funds for the cross-cutting activities described below.

C. Copenhagen Accord and cross-cutting activities

The Copenhagen Accord establishes a number of economy-wide actions that countries should undertake – specifically Low Emissions Development Strategies, and National Greenhouse Gas Inventories. However, our budget is divided into three pillars and not every country received all three pillars. In order to support economy-wide planning and measurement, it may be necessary for funds in one pillar to contribute to a broader strategic planning process that affects other sectors normally covered under a different pillar. USAID Washington will work directly with any Mission to provide assistance in designing programs that attain these cross-cutting results. As

an example, it may be appropriate to use Adaptation funds as part of creating a Low Emissions Development Strategy if part of that strategy is to identify climate resilient development options. Or, Sustainable Landscapes funds may contribute to the development of a National Greenhouse Gas Inventory system that will also report on energy sector emissions. However, implementing activities to actually collect energy data would require the use of Clean Energy funds.

III. Supplementary explanation of GCC SUSTAINABLE LANDSCAPES

FY10 Sustainable Landscapes Reporting Guidance Clarifications December 21, 2010

Direct and indirect GCC funding: The GCC Sub-Key Issues (Clean Energy, Adaptation, Sustainable Landscapes) are strategic budget categories under the President's Global Climate Change Initiative (GCCI) for which Congress earmarked funding in FY10. Both direct and indirect funding may be attributed to each of the three GCC Sub-Key Issues. In FY10, operating units were given control levels for **direct** GCC funds under the three GCC Sub-Key Issues. Direct funds cannot be counted against other Key Issues, including between the GCC Sub-Key Issues. While strategic programming that integrates adaptation and mitigation is encouraged, the same funding cannot be counted for both Adaptation and Sustainable Landscapes Sub-Key Issues. **Indirect** GCC funds can be attributed from other Key Issues such as Biodiversity, Agricultural Development, and Water to a GCC Sub-Key Issue as appropriate. Indirect funds are essential to meeting USG international assistance climate change goals.

GCC sustainable landscapes requirements: A GCC sustainable landscapes program, whether funded with direct or indirect funds, must meet the five requirements below. Within each requirement, standards for direct and indirect GCC funding may differ. [note that the details of these requirements will be adjusted in the FY11 OP guidance to reflect the full scope and strategic focus of the U.S. REDD+ Strategy]

1. Funding:

- a. **Direct** sustainable landscapes programs must have sustainable landscapes pillar funding and not be attributed to any other initiative or earmark.
- b. **Indirect** programs or activities have funding that is not from GCC pillar direct funding.

2. GCC policy priorities:

- a. **Direct** sustainable landscapes programs should address the Administration's goal of helping developing countries achieve climate resilient and low emissions development by supporting one or more of the priority types of activities:
 - i. creation and implementation of national strategic plans on climate change mitigation
 - ii. emissions inventories
 - iii. carbon market readiness
 - iv. targeted field demonstration activities
- b. **Indirect** funded programs are encouraged, but not required to address those priorities.

3. GCC goal or objective:

- a. **Direct** programs must have an explicit GCC long-term goal or near-term objective.
- b. **Indirect** funded programs must have a GCC or a reduced deforestation goal or objective.

4. GCC indicators:

a.

Direct and indirect programs must monitor their impact on addressing climate change using one or more GCC indicators, at least one of which must be a USAID standard GCC indicator. Programs with field level activities and impacts must report estimated CO2 emissions reductions and sequestration. Note: Hectares measures can be converted to CO2 estimates via <http://winrock.stage.datarg.net/gcc/>

5. Site level activities on forest mitigation:

a. **Direct** programs that have field sites should support field activities that have the intent to reduce greenhouse gas emissions or enhance sequestration of carbon associated with forests (see FAO definition of “Forest”).

b. **Indirect** programs have site level activities that will bring forest mitigation benefits such as reducing emissions from forests or enhancing sequestration by forests or trees.

IV. Supplementary explanation of GCC ADAPTATION

A. Goal, Strategic Approach, and Expanded Definition

Adaptation means adapting to the negative impacts of climate change. The goal of activities in this Sub-Key Issue is to build adaptive capacity in regions and countries affected by the negative impacts of climate change.

Activities that support adaptation programs should be built upon climate vulnerability and adaptation analyses. In some communities and countries, useful analyses may exist; where they do not, eligible activities also include conducting vulnerability and adaptation analyses, and building capacity to do those analyses. A number of resources on vulnerability and adaptation are available and can be found at: http://www.usaid.gov/our_work/environment/climate/policies_prog/vulnerability.html and at: www.climate1stop.net

USAID Adaptation investments must have the explicit objective of assisting developing countries to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks.

B. Criteria

Focused/Direct GCC funded investments in Adaptation should meet all of the following criteria:

1. **Funding:** Program/activity must have climate change adaptation pillar funding and not be attributed to any other initiative.
2. **Objective:** Program/activity has the explicit objective of reducing vulnerability of human or natural systems to the impacts of climate change and climate-related risks. Eligible Adaptation programs/activities will fall under the following broad categories:
 - **Science and analysis for decision-making:** Investments in scientific capacity, improved climate information and predictions and diffusion of information, and evidence-based analysis to identify vulnerable sectors, populations, and regions and to evaluate the costs and benefits of potential adaptation strategies.
 - **Effective governance for climate resilience:** Investments in capacity to use climate information and analysis in decision-making, effective governmental coordination and response to climate change, improved public communication and education, and strengthened community, civil society, and private sector engagement on climate change.
 - **Implementation of climate solutions:** Investments in integration of adaptation strategies into programs in infrastructure, health, water, agriculture, disaster risk reduction, conflict, natural resources management, and other sectors.
3. **Indicators:** Program/activity monitors its impact using one or more USAID climate change indicators, at least one of which must be a standard indicator.

4. **Outcome:** Program/activity reduces or supports the reduction of vulnerability of human or natural systems to the impacts of climate change and climate-related risks.

C. Illustrative examples of activities eligible for “Focused/Direct” Adaptation funding:

1. Science & analysis for decision-making

- Developing tools for climate information dissemination, such as building new capability or extending the reach of the SERVIR and FEWS NET programs.
- Preparing guidance on the application of climate information to decision making.
- Support for modeling and research to better understand climate impacts in specific regions or sectors.

2. Effective governance for climate resilience

- Strengthening government and local community response and communications capacity for climate change-related disasters, such as floods.
- Capacity building among decision-makers to use hydro-meteorological data to inform climate-resilient planning.
- Capacity building of public health systems to respond to climate risks.

3. Implementation of climate solutions

- Increasing water storage to deal with increased variability in water supply.
- Distributing drought-resistant seeds to deal with reduced rainfall.
- Introducing and enforcing flood management plans to reduce vulnerability to rising sea levels.
- Community-based natural hazards management programs.
- Risk reduction through activities such as flood and famine early warning systems, negotiation of trans-boundary water issues, or meeting critical infrastructure needs.

D. Illustrative examples of activities not eligible for “Focused/Direct” Adaptation funding

- A program using agriculture funding promotes conservation agriculture practices to reduce soil erosion and increase productivity. Such a program would provide climate benefits because a drop in productivity due to climate change would be less severe; this climate resilience benefit was not an objective of the program, and the program does not use climate change funds or report against climate change indicators. The climate benefits are real but ancillary to the primary purpose of the program.
- A program using non-climate funding promotes economic diversification in rural areas. As a result, the percentage of people relying heavily on agriculture for their livelihoods declines. Climate shocks to local agriculture systems affect fewer people. The primary objective of the program is poverty reduction, but there are real benefits in terms of climate resilience.

V. Supplementary explanation of GCC CLEAN ENERGY

A. Goal, Strategic Approach, and Expanded Definition

USAID’s clean energy programs and activities reduce global warming by promoting the sustainable use of

renewable energy technologies, energy efficient end-use technologies, carbon sequestration and carbon accounting. A primary objective of these programs must be to reduce, mitigate, and/or sequester emissions of greenhouse gasses. Clean energy includes USAID programs and activities in the following areas:

a) Direct expenditures on promotion and deployment of clean energy (renewable energy technologies, energy efficient end-use technologies, carbon sequestration and carbon accounting);

b) Expenditures related to the preparation and implementation of the clean energy components of Low Carbon Development Strategies or Low Emission Development Strategies (LEDS). These expenditures may include preparation of strategies and support for implementation of specific LEDS components. Support for implementation of LEDS components related to nuclear or fossil fuel technologies, including the production or direct use of these fuels, does not qualify;

c) Expenditures for strengthening greenhouse gas inventory and accounting systems, including methodological development, energy statistical systems, archiving, quality control and improvement, reporting, and institutions and human capabilities;

d) Expenditures related to promoting carbon market readiness and carbon market mechanisms, institutions and human capabilities;

e) Expenditures on programs that promote or establish critical preconditions to sustainable clean energy programs. These can include:

- o design and technical support for development of clean energy programs and their components; o support for reforms that significantly improve cost recovery and establish the financial capacity in the energy sector to make investments in clean energy;

- o development of the enabling environment (policies, laws, regulations and institutions) that directly support sustainable clean energy programs;

- o establishment or strengthening of energy sector and utility regulatory and planning capacity that is an essential precondition to sustainable clean energy development; and

- o transmission and system operating investments that are specifically designed for the evacuation, transport and trade in renewable energy.

f) Expenditures on nuclear, gas, coal and oil for production, direct use as well as electricity generation in almost all situations do not qualify as clean energy expenditures. In general, do not classify funds used for the production, direct use, or improvement of energy efficiency of nuclear, coal, oil or other fossil fuels as “clean energy” expenditures. There may be a very limited number of exceptional cases of fossil fueled generation that can be classified as clean energy due to exceptional greenhouse gas reductions involved. The expenditures that would qualify are limited to those associated with electricity generation and gas transmission infrastructure using gas that would otherwise be flared or vented.

g) For transmission and operating system infrastructure, where only part of the energy carried by the system is “clean energy,” a reasonable allocation of a portion of the USAID expenditure should be determined and documented.

h) Expenditures that are intended to significantly improve the performance and reduce losses of electricity and gas distribution utilities may qualify as clean energy if they are integral to a GHG emissions reduction plan.

B. Criteria

Focused/Direct GCC funded investments in Clean Energy should meet all of the following criteria:

1. **Funding:** Program/activity must use focused funding from the GCC initiative and the clean energy pillar (i.e., must use funding apportioned from the \$108.5M clean energy directive) and not be attributed to any other initiative.

2. Policy Priorities: Program/activity helps developing countries achieve climate resilient and low emissions development through support for creation and implementation of national strategic plans on climate change, emissions inventories, carbon market readiness, targeted clean energy field demonstration activities and activities that promote or establish critical preconditions to sustainable clean energy programs that will lead to significant deviations in carbon emission trajectories over the long-term from established baselines.

3. Objective: Program/activity has an explicit objective to seek climate change-related outcomes of reducing, mitigating, and/or sequestering emissions of greenhouse gasses.

4. Indicators: Program/activity monitors its impact using one or more USAID climate change indicators, at least one of which must be a standard indicator. Relevant standard indicators are under 4.4.1 (Modern Energy Services), 4.8.1 (Natural Resources and Biodiversity), and 4.8.2 (Clean Production) and include the following language: *“Quantity of greenhouse gas emissions, measured in metric tons CO2 equivalent, reduced or sequestered as a result of USG assistance”*

5. Outcome: The activity contributes to the objective of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit greenhouse gas emissions or to enhance greenhouse gas sequestration. Such a program/activity would contribute to one or more of the following:

- a. The mitigation of climate change by limiting anthropogenic emissions of GHGs including gases regulated by the Montreal Protocol; or
- b. The protection and/or enhancement of GHG sinks and reservoirs; or
- c. The integration of climate change concerns with the recipient countries’ development objectives through institution building, capacity development, strengthening the regulatory and policy framework, or research; or
- d. Developing countries’ efforts to meet their obligations under the UNFCCC.

In addition, operating units must provide the following information on USAID’s clean energy programs:

- A brief explanation of the relationship between the activity/program and the sustainable deployment of clean energy technologies;
- The anticipated long-term impact on CO2 emissions in that country;
- How the activity supports that country’s commitments under the UN Framework Convention on Climate Change (UNFCCC).
- How the activity supports USG commitments under the UNFCCC.

C. Illustrative examples of activities eligible for “Focused/Direct” GCC

Clean Energy funding

Note: All programs below would need to report on the standard GCC indicators and utilize funds specifically earmarked for GCC/clean energy to count against the earmark:

- End-use energy efficiency program
- Support for development of a low emission development strategy
- A program that supports regional power pool development to enable renewable electricity generation to be sold to markets that do not possess their own renewable energy resources.
- A program to support development of agricultural bio-digesters, improved cookstoves, and/or electricity generation from landfill methane.
- A program that enhances and facilitates financing for end-use energy efficiency and/or renewable energy technologies
- A program to disseminate solar water heaters
- A program to support renewable energy generation through a combination of policy, regulatory, legal, tariff

reforms and/or direct transaction assistance.

- A program focused on construction of a transmission network and development of operating capacity for the transport of hydropower from a neighboring country.
- Programs that support the development of the enabling environment (policies, laws, regulations and institutions) which directly support sustainable clean energy programs.

D. Illustrative examples of activities not eligible for “Focused/Direct” GCC Clean Energy funding

- An energy program focused on improving the enabling environment for private sector investment in coal or diesel fired power plants.
- An energy program that promotes supply-side energy efficiency through the re-powering of existing, high GHG-emitting fossil fuel power plants, retrofitting these plants with more efficient turbines, and installing more energy efficient transformers in a power distribution grid with a large fossil generation component.
- A program that seeks to replace unregulated and highly polluting, small diesel generators with a few centrally located, natural gas generating facilities equipped with advanced environmental cleaning technologies.

E. Illustrative examples of activities that are still under negotiation with the Hill regarding their eligibility to use “Focused/Direct” GCC Clean Energy funding

- A program that explicitly includes an objective of mitigating GHG emissions through supporting the development of policies, regulations, and an enabling environment to change current practices of gas flaring through the creation of domestic markets and productive uses for the previously flared gas.
- A program that explicitly includes an objective of mitigating GHG emissions through supporting substitution of natural gas for gasoline and diesel fuels for vehicular transportation.
- A program that explicitly includes an objective of mitigating GHG emissions through supporting substitution of natural gas for coal, diesel or heavy fuel oil used for electricity generation.
- A program that works to reduce technical losses in a distribution system powered by coal fired power plants.
- A program that promotes combined heat and power (cogeneration) from fossil fuels (coal, oil and/or natural gas) in district heating
- Design and implementation of a “smart grid” program to modernize energy generation, transmission and distribution systems for which a significant amount of the energy carried by the system is electricity generated by fossil-fuels

USG Initiative on Enhancing Capacity for Low Emission Development Strategies Background and Talking Points for USG Team

Drafted October 2010; Revised November 2010; Updated March 2011

TALKING POINTS

Purpose: The talking points and Q&A below are meant to assist the USG, including Missions and Embassies, with **framing the EC-LEDS initiative appropriately** in a diplomatic context, discussing the initiative with stakeholders both inside and outside of host country partner governments, and working closely with all relevant members of both Embassy and USAID Mission staff to get this exciting new program off on the right foot in participating countries.

For additional information please contact Collin Green at cgreen@usaid.gov or Alexia Kelly at kellyac@state.gov.

1. Background Talking Points

- Climate change is one of the century's greatest challenges and is one of President Obama's highest diplomatic and development priorities.
- The U.S. Government is launching a new, whole of government effort, Enhancing Capacity for Low Emission Development Strategies (EC-LEDS). The USG's goal for this program is to partner with interested countries to help them plan a more sustainable development path that reduces emissions trajectories over the long term while fostering economic growth.
- Through the Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) program, the USG aims to support the development of Low Emission Development Strategies (LEDS) in up to 20 countries by 2013. There are two primary elements of the program: providing targeted in-country technical assistance and developing a shared global knowledge base on LEDS.
- The EC-LEDS program is an **important diplomatic priority** for the U.S. State Department and USAID and something that Special Envoy for Climate Change Todd Stern views as an opportunity to enhance key diplomatic relationships with partner countries, furthering our global goal of limiting temperature increase to no more than two degrees Celsius.
- The **Copenhagen Accord** noted that a low-emission development strategy is indispensable to sustainable development and the **Cancun Agreements** explicitly encourage developing countries to develop LEDS in the context of sustainable development.
- The focus this year in the UNFCCC is on **implementation of the Cancun Agreements**, and the EC-LEDS initiative is one important element of how the USG is looking to promote implementation and provide on the ground assistance for developing countries.
- The EC-LEDS initiative is an important component of meeting the USG commitment made at COP15 in Copenhagen to help mobilize **fast start financing** approaching \$30 billion by 2012. Funding for implementation of this program – provided both through USAID in Washington and the field, and other USG agencies in Washington – is part of this fast start commitment.

2. EC-LEDS Initiative Details

- The EC-LEDS initiative is co-led by the U.S. Agency for International Development and the U.S. Department of State and advised by an interagency team of experts from a range of federal agencies, including: the U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Department of Agriculture, U.S. Department of Energy, and the U.S. Treasury, among others. In addition, the interagency EC-LEDS team works closely with sector-specific experts and consultants who provide technical assistance.
- The U.S. Government is currently working with **five partner countries** in the first phase of this initiative, including: Mexico, Colombia, Bangladesh, Vietnam and Gabon. The U.S. Government is initiating engagement with a second phase of partner countries to include: Georgia, Peru, the Philippines, Indonesia, Costa Rica, Ukraine, and Kenya. A third phase of countries will follow, bringing the total number of partner countries to a goal of 20 by the end of 2013.
- The EC-LEDS initiative takes a **forward-looking approach to meeting national development objectives**, partnering with countries to help them transition toward a low-emission development path that supports and complements their ongoing efforts to address climate change.
- EC-LEDS is intended to be **partner-country driven**, with the U.S. Government providing focused technical and analytical assistance, as well as targeted implementation assistance, to partner countries to help them with developing (or improving) and implementing their LEDS. The USG will provide support based on priorities identified by the partner country, agreed upon by the USAID Mission and U.S. Embassy in country, and supported by technical analysis and resources of the interagency EC-LEDS team.
- The EC-LEDS initiative will not seek to reinvent the wheel. This effort will **build upon existing climate change-related strategies** in partner countries – identifying and addressing gaps in strategy development and planning, supporting implementation, and helping strengthen plans and policies through technical assistance and capacity building.
- Where long-term development plans, economic growth strategies, climate change mitigation plans or key sectoral elements of these plans already exist in partner countries, or have been endorsed by partner country governments, USG assistance through EC-LEDS will be targeted toward integrating these plans, addressing gaps and strengthening plans and policies through technical assistance and capacity building identified by the host country.
- The emphasis of EC-LEDS is on the E and C – enhancing capacity. Our aim is to work with partner countries to build the capacity of their government and institutions to develop and implement the strategy and the actions identified within this living document.
- It is the expectation that countries that partner with the USG in this program will engage actively in the process of developing and implementing their strategy. Active engagement can take the form of both collaboration and dedication of resources – human, institutional, financial – to this effort to ensure that the strategy developed is country-driven and implementation is country-led.
- It follows that USAID, and more broadly the USG, will not be expected to fund every activity identified in the strategy. We expect that the partner country government will commit to

implementing as much of this strategy as they are able, and where there are gaps or needs, the international and donor communities can step in and use the strategy to guide their assistance.

- Strong participation and engagement in the EC-LEDS process from the domestic and international private sector, NGO's, other institutions engaged in LEDS-related activities and civil society is a high priority of the USG.

3. The U.S. vision of Low Emission Development Strategies

- A LEDS, broadly defined, is an actionable country-level strategy for sustainable, long-term development that achieves a country's development and economic growth objectives while reducing the growth rate of long-term greenhouse gas emissions. It should be based on sound analytical foundations, and articulate concrete actions, policies, programs and implementation plans to support those objectives.
- LEDS are voluntary and non-binding and are meant to provide an integrated and comprehensive pathway for long-term, sustainable development and private sector growth. LEDS can be a tool to inform optimal mitigation strategies and channel international support from various sources.
- We use the term Low Emission Development Strategies, or "LEDS" to provide a consistent identifier for the U.S. EC-LEDS program. However, we recognize that individual countries may apply identifiers other than LEDS to their low emissions planning efforts.

4. Details of In-Country Support

- USG assistance in EC-LEDS partner countries will emphasize government-to-government assistance coupled with more traditional contract work conducted by experts, as well as work with in-country experts, NGO's, other institutions engaged in LEDS, and the private sector, depending on the unique circumstances and identified needs of each partner country.
- We recognize that EC-LEDS partner countries are at varying stages of development in their LEDS process – some have spent years developing and refining a strategy; others have undertaken related analytical and planning work, but have not yet developed a LEDS as the U.S. defines it. The USG will collaborate with partner countries to tailor support to each country's unique circumstances and identified needs.
- Many countries view LEDS as encompassing both mitigation and adaptation. Our vision is one of an integrated approach that predominantly focuses on mitigation – including both clean energy and land use sectors such as forests and agriculture – but recognizes that many actions can achieve both adaptation and mitigation benefits. The U.S. aim will be to support development of a LEDS that not only contributes to mitigation objectives, but results in economically robust, climate-resilient economies that are less vulnerable to the impacts of climate change.
- In both the development of the generalized methodology and in the delivery of technical support, the U.S. will draw upon lessons learned from domestic approaches and partner country LEDS efforts already underway. Clearly U.S. domestic programs will also benefit from this engagement with partner countries that are addressing similar technical and policy challenges.

- The USG will actively collaborate with partner countries and other institutions engaged in these activities to ensure that our support complements and does not duplicate efforts by the partner country, donor organizations, or others.
- As a basis for our engagement with partner countries, the USG has developed a generalized approach and framework for EC-LEDS support, drawing on lessons learned from our experiences and that of others.
- Our approach to initiating EC-LEDS with a partner country is as follows:
 1. **Form a USG EC-LEDS team for each country**, to be led by the USAID Mission in close consultation with the U.S. Embassy. The team will include members from USAID/Washington, with support from the U.S. Departments of State, Energy, and Agriculture, the U.S. EPA, U.S. Forest Service, and other agencies.
 2. **Confirm the partner government's interest**, for example through a formal exchange of letters. The in-country U.S. Mission and Embassy will lead this process, with support and assistance from interagency colleagues in Washington. Letters should indicate a partner country's willingness to participate in the EC-LEDS initiative and should be signed by a senior official within the partner country government (e.g., at the minister or vice minister level). The in-country U.S. government team will determine to which ministry or ministries to send the letter.
 3. **Develop a jointly agreed upon work program with partner governments**. This effort involves sending to partner countries interagency scoping teams, which will work jointly with Mission and Embassy staff to meet with host country government officials, donor organizations and other relevant stakeholders. Based on findings of the scoping missions, the EC-LEDS team will work with partner countries to outline specific areas in which the USG can provide technical and capacity building support to host country governments for LEDS development or advancement. Resulting work programs may be implemented over the following 12 to 36 months.
 4. **Begin to provide in-country process support and supporting key on-the-ground activities**, as outlined in the joint work program. Examples of support could include (but are not limited to):
 - Applying econometric modeling techniques and tools to identify and analyze long-term climate change mitigation opportunities that are consistent with each country's environmental, security and economic growth objectives
 - Assisting with the development of transparent emission and carbon inventories and reference baselines at the national and sectoral levels
 - Assisting with the identification of investment barriers in key sectors, such as energy, land-use, agriculture, forestry, and transportation and the exchange of good practice policies and other potential solutions
 - Sharing assumptions on technology costs and characterizations

- Helping to identify and analyze policies that facilitate private investment and improve partner countries' capacity to access additional sources of private and public financing to support LEDS implementation
- Advising on the development of technology and policy deployment pathways and assisting with articulation of detailed, actionable policy and technology projects and programs. Actionable projects could include improving regulation to encourage clean energy development; enhancing the capacity in partner country governments for emissions accounting and measurement; encouraging innovative climate change mitigation solutions from small and medium enterprises; and more.

LEDS Q&A

1. What is the difference between LEDS and the other acronym you keep mentioning – EC-LEDS?

- A LEDS is the strategic framework – based on sound analytical foundations – that articulates concrete actions, policies, programs and implementation plans to promote economic growth in a way that lowers a country's greenhouse gas emissions from what they would be if the country carried on with business as usual. The country develops and drives this strategy.
- Enhancing Capacity for LEDS or EC-LEDS is the USG initiative to build capacity for the development of LEDS in up to 20 partner countries by 2013. EC-LEDS is an important component of meeting the USG commitment to help mobilize global fast start financing approaching \$30 billion by 2012.

The initiative has two main component parts:

- Provide targeted technical assistance for LEDS development and implementation to enhance and strengthen existing strategies, strengthen in-country human and institutional capacity, provide tools and approaches to assist with LEDS management, revision, and implementation, and identify key policies, programs and financing sources to assist with implementation
- Build a Shared Global Knowledge Base on LEDS to facilitate the exchange of experience, good practices, data, and results and to help build capacity of our EC-LEDS partner countries.

2. What is a LEDS – how do you define it?

- A LEDS, broadly defined, is an actionable country-level strategy for sustainable, long-term development that achieves a country's development and economic growth objectives while, at the same time, reducing the growth rate of long-term greenhouse gas emissions. It is based on sound analytical foundations, and articulates concrete actions, policies, programs and implementation plans to support the objectives just mentioned.
- We recognize there is no one-size-fits-all approach for LEDS preparation or implementation. Several countries have undertaken LEDS-related work (e.g., South Africa's Long Term Mitigation Scenarios and Mexico's Special Program for Climate Change) and several donors have provided

assistance to support LEDS-related work (e.g., the World Bank's Low Carbon Growth Country Studies program).

- The following elements form a general framework that illustrates the U.S. perspective on LEDS:
 - First, a collection of data that describes the current situation, such as a partner country's development goals, national greenhouse gas inventory, and basic economic and resource data
 - Second, a set of long-term projections of business-as-usual economic growth and greenhouse gas emissions pathways
 - Third, diverse development scenarios that are designed to achieve the targeted economic and development goals, while at the same time slowing the growth rate of emissions and supporting climate change resilience
 - Fourth, a set of prioritized policies, programs and measures – identified through broad stakeholder engagement – that are necessary to achieve a low-emissions pathway
 - And fifth, domestic implementation plans that include strategies for financing, for attracting investment, and for measuring progress. Depending on the action, financing can be linked to domestic budgets and accounts as well as private sector (domestic and international) investment and international support to facilitate implementation.
- At a fundamental level, a LEDS is about *transformative* development that aims to integrate climate change considerations across all development priorities. The U.S. envisions that a LEDS will help a country reduce the carbon intensity of its future economy by identifying and facilitating smart investments today, while at the same time promoting resilient development by considering barriers to sustainable economic growth, such as climate change stresses, and incorporating solutions to these barriers into its recommendations.

3. Why is the LEDS initiative of interest to a developing country, recognizing that their contribution to historic global GHG emissions is low?

- In our view, LEDS serve as a means to provide an integrated and comprehensive pathway for long-term, sustainable development and private sector growth. LEDS may also pave the way for scaled up financial support and national readiness to access international markets.
- Countries that map and implement strategies will be the best positioned to benefit from the new global low carbon future and to access climate change financing from public and private sectors. These countries will be seen as leaders in low-carbon economic development.

4. Who will you work with in the partner country Government?

- Our experience thus far in EC-LEDS partner countries indicates that the involvement of several ministries may be key to program success. Ministries responsible for long term development planning, budgeting and treasury accounts, and environmental issues, are often important partners in

this initiative, along with other line ministries responsible for implementing sectoral policies and programs that will ultimately contribute to economic growth.

- We have also found in past scoping missions that other donors active in partner countries can provide valuable insights into this matter. Close coordination and cooperation with other donors where possible and appropriate can provide additional resources and leverage to accomplish the larger programmatic goals of the EC-LEDS program.

5. Where will funding for EC-LEDS come from?

- The USAID mission in country will support the EC-LEDS initiative through global climate change programs, specifically through its mitigation pillars focused on sustainable landscapes and clean energy. The U.S. Government, as part of its Fast Start Financing commitment in Copenhagen, is allocating funding to EC-LEDS partner countries for this purpose.
- The U.S. Global Climate Change Initiative guidance instructs that directed global climate change mitigation funding be used to “reduce, mitigate, and sequester greenhouse gases that contribute to global climate change.” Since this is also a long-term objective of a LEDES, our clean energy and sustainable landscapes programs and activities should be complementary and supportive of country driven LEDES work.
- USAID and the State Department will also provide some centrally funded support, for example assistance for the initial scoping mission, overarching coordination for the EC-LEDS initiative, engagement in broader global coordination efforts, and creation of mechanisms through which the USAID Missions in country can access technical support from other USG Agencies or contract organizations.
- The outputs of the EC-LEDS initiative are meant to provide a framework for present and future USG and USAID technical assistance for climate change mitigation that supports and complements a country’s long-term, low-emission development path.

6. Adaptation is a priority for our country. Why are we only talking about mitigation?

- We recognize that Adaptation is a priority for many other developing countries.
- But it is important to note that the EC-LEDS initiative is meant to focus on the mitigation aspect of addressing global climate change.
- Of course the EC-LEDS initiative will certainly integrate adaptation concerns. EC-LEDS investments will be climate resilient – implemented in a way that takes into account predicted climate change impacts and increases the resiliency of partner countries to these impacts.

7. How will EC-LEDS be implemented?

- An interagency USG team is providing technical assistance to help get the ball rolling on this initiative, conducting some of the initial assessment work, supporting partner government engagement, and providing assistance with program planning.

- Following the initial scoping and assessment efforts, the USAID mission will devote FY11 – 12 resources both to help the partner government develop their LEDS, and to begin to implement some of the projects identified, where U.S. engagement can add particular value. Both strategy development and implementation of key actions can happen concurrently.

Draft Letter to Partner Country Inviting Participation in the USG LEDS Program

Honorable XXX,

I am writing to express the United States Government's interest in partnering with [country] as your government works to develop a low carbon growth plan and low carbon strategy. We recognize [Country's] leadership in addressing climate change, and we noted with great interest your [insert date] submission to the UN Framework Convention on Climate Change, which included a reference to [Insert statement related to low-emission or low-carbon strategy if included in Copenhagen Accord submission. If not, mention previous GCC strategy or other relevant documents or statements].

As you know, the Copenhagen Accord notes that "a low emissions development strategy is indispensable to sustainable development." The Cancun Agreements re-emphasize the importance of low emission development strategies. In response, and as part of our Copenhagen commitment to mobilize fast start financing, the U.S. Government has launched a new effort – Enhancing Capacity for Low Emissions Development Strategies (EC-LEDS). The U.S. Government has identified [country] as a potential partner under this initiative.

Through this initiative, the U.S. Government is offering to provide specialized assistance and expertise to support the development of LEDS in partner countries. We fully intend for this effort to be guided by our partner countries. Where frameworks or similar projects are already underway, our intention is to complement these efforts by providing targeted technical assistance to fill gaps and build capacity to enhance these existing analytical and planning frameworks to increase the transparency and technical rigor and robustness of the resulting strategies. Examples of support services could include:

- Collaborating on econometric modeling techniques and tools to identify and analyze long term climate change mitigation opportunities that are consistent with identified development, security and economic growth objectives;
- Assistance with the identification barriers in key sectors, such as energy, land-use, agriculture, forestry, and transportation and the sharing of best practice policies and other potential solutions;
- Sharing assumptions on technology costs and characterizations;
- Identifying public and private sources of financing to support project implementation; and
- Developing technology and policy deployment pathways and programs.

Please contact us if you need any further information or have any questions. Thank you for your continued cooperation and leadership on the pressing issue of global climate change.

Sincerely,

Xxx

Cc:

Draft response letter from Government regarding participation in USG LEDS program

Dear XXX,

Thank you for your invitation to partner with the United States Government on its Enhancing Capacity for Low Emissions Development Strategies initiative. As evidenced by our February 2010 submission to the UNFCCC, the Government of [country] recognizes the importance of long term strategic planning to meet its economic growth and climate change mitigation goals. [Country] looks forward to partnering with the U.S. as we develop a voluntary low carbon growth plan. We would like to schedule a follow up meeting to discuss next steps in this effort.

Sincerely,



USAID | BANGLADESH

FROM THE AMERICAN PEOPLE

June 30, 2010

AIDOL-10 #0236

Dr. Hasan Mahmud
State Minister
Ministry of Environment and Forest (MOEF)
Building 6
Bangladesh Secretariat
Dhaka 1000

Subject: Selection of Bangladesh as one of the top priority countries under the U.S. government's Support Services for Low Emission Development (SSLED)

Honorable State Minister:

I am delighted to inform you that Bangladesh has been selected as a priority country under the United States Government (USG)'s new global climate change initiative, Support Services for Low Emission Development (SSLED). As you are aware, the Copenhagen Accord notes that "a low emission development strategy is indispensable to sustainable development." In response, the USG has launched the SSLED effort as part of its commitment to addressing climate change.

SSLED aims to support the development of Low Emission Development Strategies (LEDS) in 30 countries by the end of 2013. The USG has identified Bangladesh, along with 17 other countries, as a candidate for the first phase of the SSLED effort and invited our feedback regarding the possibility of Bangladesh's participation in this effort.

We are prepared to support Bangladesh's participation in the program because of Bangladesh's vulnerability to global climate change (GCC) as well as the Government of Bangladesh's commitment to GCC adaptation as evidenced by the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009 and the establishment of its own \$100 million adaptation fund.

The initial focus of the SSLED effort will be to provide technical support for country preparation and initial implementation of LEDS that are designed and led by the host country. We will share more information with you as further details are provided to us by Washington on the specific details of the program.

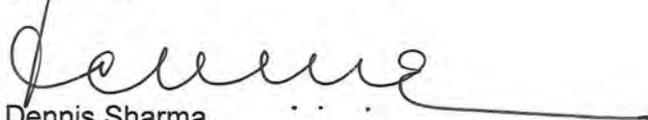
U.S. Agency for International Development
U.S. Embassy
Madani Avenue, Baridhara
Dhaka-1212, Bangladesh

Tel: (880-2) 885-5500
Fax: (880-2) 882-3648
www.usaid.gov/bd

In the meantime, we respectfully request you to provide your consent in writing to participate in the SSLED effort in collaboration with the USG.

Please do not hesitate to contact us if you need any further clarification or have any questions. Thank you for your continued cooperation and leadership.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dennis Sharma', with a long horizontal flourish extending to the right.

Dennis Sharma
Acting Mission Director

cc:

1. His Excellency Mr. James F. Moriarty, US Ambassador to Bangladesh
2. Mr. H.T. Imam, Honorable Advisor to the Prime Minister
3. Dr. Mihir Kanti Mazumder, Secretary, MOEF

Clearance Page:

Letter Announcing the SSLED Program to the MOEF State Minister

Drafted by: Azharul H Mazumder, EG X 2540

Clearances:

1. Azharul Mazumder / DEGO(A)  date 6/27/10
2. Jo Lesser-Oltheten / DPRO (A) pp.  date 6/30/10
3. Jo Lesser-Oltheten / D Dir (A) pp.  date 6/30/10
4. Dennis Sharma / DIR(A)  date 6/30/10



Ministry of Environment & Forest
Government of the People's Republic of Bangladesh

Building 6, 13th Floor
Bangladesh Secretariat
Dhaka-1000.
Tel: 02 7160587
Fax: 02 7160166

Ref: MoEF/ State Min/Misc-2/2010/308

Date: 12 July, 2010

Madam Denise Rollins
Mission Director, USAID
U.S. Embassy, Baridhara
Dhaka 1212.

Subject: Selection of Bangladesh as one of the top priority countries under the US government's Support Services for Low Emission Development (SSLED).

Dear Madam Rollins:

I am pleased to know that Bangladesh has been selected for the 'Support Services for Low Emission Development (SSLED)', a new global climate change effort of the US government. As one of the most climate vulnerable countries as well as a signatory of the Copenhagen Accord, Bangladesh wholeheartedly appreciates this kind of praiseworthy initiative and we look forward to the implementation of the Copenhagen Accord. Although mitigation is not mandatory for Bangladesh, we preferably look for green path of development for the better interest of the global community. Therefore, a low emission development strategy is crucial for our adaptation and mitigation actions. We welcome the SSLED effort of the US government and are happy to participate in this initiative. I would like to offer our grateful thanks to the US government for its continued assistance and cooperation in addressing the challenges of global climate change in Bangladesh.

Please accept the assurances of my highest consideration.

Yours sincerely,

Dr. Hasan Mahmud
State Minister for Environment and Forests

Cc:

1. His Excellency Mr. James F. Moriarty, US Ambassador to Bangladesh.
2. Secretary, Ministry of Environment and Forests, Dhaka.
3. Secretary, ERD, Ministry of Finance, Dhaka.



Ministerio de Ambiente, Vivienda y Desarrollo Territorial
Despacho Ministro
República de Colombia

BICENTENARIO
de la Independencia de Colombia
1810-2010



Bogotá, D.C.

6 NOV 2010

2000 2 145 122

Sr
KEN YAMASHITA
Director USAID/Colombia
Bogotá, D.C.

Señor Director,

Colombia hoy está en un momento crucial para definir su desarrollo y el impacto que este tendrá sobre sus recursos naturales y los del mundo. Siendo una economía carbono-eficiente en la actualidad, el país tiene como reto no la disminución de sus emisiones de gases de efecto invernadero (GEIs), sino la difícil tarea de alcanzar los niveles de desarrollo deseados sin incrementarlas.

El primer paso para lograr esta meta es contar con la información necesaria para determinar qué alternativas tecnológicas, de procesos o metodologías son las más viables y costo-eficientes en sus sectores productivos. Con esta información, planeamos trabajar de la mano con los sectores para identificar las opciones de mitigación apropiadas en el país (NAMAs), crear capacidades a nivel sectorial para su implementación, y potencializar recursos nacionales con cooperación internacional para llevarlas a cabo. Esto en pocas palabras, es como vemos la Estrategia Colombiana de Desarrollo Bajo en Carbono (ECDBC).

Al recibir su comunicación del ocho de noviembre del presente año, donde expone el programa de Estados Unidos para apoyar "LEDS", vemos que estamos en una etapa óptima para coordinar esfuerzos y potencializar la ECDBC. Por esta razón, quisiera manifestarle oficialmente el consentimiento del Ministerio de Ambiente, Vivienda y Desarrollo Territorial para iniciar este proceso de cooperación, resaltando la pertinencia de esta con las acciones que adelanta y planea el país en este campo.

Con sentimientos de consideración y aprecio,

BEATRIZ URIBE BOTERO
Ministra

Ministerio de Ambiente, Vivienda y Desarrollo Territorial

Revisó: Carlos Castaño Uribe – Viceministro de Ambiente
Desarrollo; Andrea García Guerrero – Coordinadora, Grupo Mitigación de Cambio Climático

**UNDERMINISTER FOR ENVIRONMENTAL
POLICY AND PLANNING**

SECRETARÍA DE
MEDIO AMBIENTE Y
RECURSOS NATURALES



February 11, 2011

"2011, Año del Turismo en México"

JONATHAN PERSHING
Deputy Special Envoy for Climate Change
U. S. Department of State

I would like to reaffirm our interest in taking full advantage of the Low Emissions Development Strategy initiative (LEDS), and support the expert mission from the United States of America to our country to identify areas and topics for LEDS.

Given the nature of the collaboration you are offering, I have requested Juan Mata, General Director for Climate Change Policies and Roberto Cabral, Deputy General Director for Policy Analysis and Strategic Funding, to provide you all the support that might be needed to organize the agenda for the scoping mission, and carry out the latter.

Please accept my acknowledgement of your special interest to encourage national policies and efforts to achieve a low-carbon intensity economic and social development.

With very best regards.

Fernando Tudela
The Underminister

c.c.p. Juan Mata General Director for Climate Change Policy..
Roberto B Cabral. Deputy General Director for Strategic Funding and Policy Analysis.

Blvd. Adolfo Ruiz Cortines 4209, piso 4, ala A, Col. Jardines en la Montaña C. P. 14210 Tlalpan, México, D. F.
Tel. +52 (55) 5628 0615 al 18 www.semarnat.gob.mx

**SUBSECRETARÍA DE PLANEACIÓN
Y POLÍTICA AMBIENTAL**

OFICIO No. SSPPA/ 000 /10

México, D. F, a 23 de noviembre de 2010



**SECRETARÍA DE
MEDIO AMBIENTE Y
RECURSOS NATURALES**

*"2010, Año de la Patria. Bicentenario del inicio de la
Independencia y Centenario del inicio de la Revolución"*

**RODGER GARNER
DIRECTOR DE LA MISIÓN EN MÉXICO DE USAID
MINISTRO CONSEJERO PARA EL DESARROLLO
P R E S E N T E**

En respuesta a su atento comunicado del 1° de noviembre del presente año, mediante el cual se ofrece la colaboración de la Agencia de los Estados Unidos para el Desarrollo Internacional con objeto de fortalecer las capacidades institucionales del Gobierno Federal y poder hacer frente a los retos del cambio climático, en especial otorgando asesoría técnica especializada bajo la iniciativa del Gobierno de los Estados Unidos "Estrategias de Desarrollo Bajas en Emisiones" (LEDS, por sus siglas en inglés), hago de su conocimiento que estamos totalmente interesados en dicha colaboración.

Además, le comunico que el Director General Adjunto de Análisis de Políticas y Financiamiento Estratégico, Roberto Benjamín Cabral y Bowling, será el responsable institucional para la concreción de su amable oferta

Sin otro particular, aprovecho la oportunidad para enviarle un cordial saludo.

**ATENTAMENTE
EL SUBSECRETARIO**

DR. FERNANDO TUDELA

C.c p: Enrique Lendo. Titular de la Unidad Coordinadora de Asuntos Internacionales. SEMARNAT
Roberto B. Cabral. Director General Adjunto de Análisis de Políticas y Financiamiento Estratégico.
SEMARNAT

No. 1504/10

The Embassy of the United States of America presents its compliments to the Ministry of Natural Resources and the Environment of the Socialist Republic of Vietnam and has the honor to inform the Ministry of the desire of the Government of the United States to invite the Government of Vietnam to participate in a new initiative called Enhancing Capacity for Low Emission Development Strategies (LEDS). Through this invitation, the U.S. Government recognizes the commitment of the Vietnamese Government to reducing greenhouse gas emissions, as shown by its development and implementation of a National Target Program to Respond to Climate Change and its participation in ASEAN CLEAN partner activities.

The U.S. Government recognizes Vietnam's vulnerability to the projected adverse effects of climate change and notes with great interest the intention of the Vietnamese Government to be associated with the Copenhagen Accord. The Accord notes that "a low emissions development strategy is indispensable to sustainable development." As part of its commitment under the Accord, the U.S. Government has launched the LEDS initiative and, acting together with the European Union pursuant to the Climate Change Initiative of the U.S.-EU High Level Consultative Group on

DIPLOMATIC NOTE

Development, has identified Vietnam as a potential LEDS partner. In coordination with the Vietnamese Government and the EU, the U.S. Government would like to provide specialized assistance and expertise to the Vietnamese Government to implement long-term strategies and policies to advance robust, sustainable economic growth while reducing emissions of carbon dioxide and other greenhouse gases.

The U.S. Government intends for this effort to be guided by the Vietnamese Government and to complement and build on existing efforts of the Vietnamese Government to mitigate and adapt to climate change through targeted technical assistance. Support from the U.S. Government to the Vietnamese Government could include:

- Collaborating on econometric modeling techniques and tools to identify and analyze long-term climate-change mitigation opportunities that are consistent with identified development, security, and economic-growth objectives;
- Assisting with identifying barriers in key sectors, such as energy, land use, agriculture, forestry, and transportation, and sharing best-practice policies and other potential solutions;

- Sharing assumptions on technology costs and characterizations;
- Identifying public and private sources of financing to support project implementation; and
- Developing technology- and policy-deployment pathways and programs.

As a first step, a team of U.S. Government climate change experts, identified the attachment hereto, would like to visit Vietnam November 1-5 to review existing climate change activities and engage with Vietnamese Government officials and domestic and international public and private donors and partners involved in climate change activities in order to tailor an approach to LEDS implementation specific to Vietnam.

The Embassy respectfully requests that the Ministry confirm whether the Vietnamese Government wishes to participate in the LEDS initiative. Should the Vietnamese Government accept this invitation, the Embassy respectfully requests that the Ministry designate a point of contact for the initiative and for the proposed visit of U.S. Government climate change experts. The Embassy's points of contact are the Environment, Science, Technology, and Health Officer, Mr. Eric FRATER (telephone: 04-3850-

5017; fax: 04-3850-5014; email: fraterem@state.gov), and USAID/Vietnam Mission Director, Mr. Francis DONOVAN (telephone: 04-3935-1218; fax: 04-3935-1265; email: fdonovan@usaid.gov).

The Embassy of the United States of America avails itself of this opportunity to renew to the Ministry of Natural Resources and the Environment of the Socialist Republic of Vietnam the assurances of its highest consideration.

Embassy of the United States of America

Hanoi, October 12, 2010

1. Dan Bilello, Partnerships Manager, Strategic Energy Analysis Center, National Renewable Energy Laboratory
2. Kate Cadamone, Economist, Climate Change Division, Environmental Protection Agency
3. Collin Green, Climate Change Specialist, Office of Environment and Science Policy, USAID
4. Sharon Hsu, Energy Specialist, USAID
5. Alexia Kelly, Climate Change Mitigation Expert/Foreign Affairs Officer, Office of Global Change, Department of State
6. Darcy Nelson, Asia Program Specialist, Forest Service, Department of Agriculture
7. Jennifer Leisch, Climate Change Science Advisor/AAAS Science and Technology Policy Fellow, USAID
8. Kristen Madler, Clean Energy Coordinator, Office for Economic Growth, Agriculture, and Trade, USAID
9. Anastasia de Santos, Economist, Office for Economic Growth, Agriculture, and Trade, USAID
10. Dan Milstein, Presidential Management Fellow, Office of Policy and International Affairs, Department of Energy
11. Eva Garen, Social Ecologist, USAID



Pre-Scoping and Scoping Statement of Work

TECHNICAL DIRECTION SUPPORT TASK ORDER

Sub-Activity No.:	Request Date: 18 August 2010
Start Date:	Completion Date: 22 October 2010
Title: Low Emission Development Strategy Pre-Scoping Mission Assessment Bangladesh and Vietnam	

Budget:	LOE:
USAID Task Manager:	Contractor: IRG
Clearance <input type="checkbox"/>	

I. Background

The goal of the U.S. Agency for International Development Global Climate Change program is to accelerate low-emissions, climate-resilient development in USAID partner countries. Developing countries seeking to improve their citizens' standard of living must find ways to grow their economies while decreasing net greenhouse gas emissions over the long-term. At the same time, their economies and societies must be able to withstand the vagaries of a changing climate ("climate-resilient"). Realizing this goal will require resources, behavior change, and creativity from a community of nations, donors, governments, businesses and households over a long period of time.

The creation and implementation of country-driven, analytically rigorous low emission development strategies (LEDS) will enable countries to transition to low carbon economic development resulting in sustained growth in employment and investment, increased financial flows through carbon markets, reduced greenhouse gas (GHG) emissions, and other social, economic, and environmental benefits.

The LEDS methodology, developed in coordination with international partners and U.S. government agencies, details the strategy, starting with the scoping and planning phase, and taking national leaders, stakeholders, and technical advisory groups all the way through the process to the implementation phase of a LEDS project.

The United States is committed to implementing a range of domestic policies to address climate change and to partnering with other countries as they shape their own strategies and policies. Many countries are already in the process of developing Low Emission Development Strategies or similar planning frameworks, including sectoral strategies such as a REDD + strategy, renewable energy strategies, energy efficiency plans or energy sector reform strategy. There is no one-size-fits all approach to this task. This program is designed to complement other efforts and be country-driven, with capacity enhancement activities tailored to the specific technical, analytic, and policy needs identified by the partner country and where U.S. partners bring unique value and expertise.

II. Objective

The objective of this sub-activity order is to provide background information that can inform a U.S. Government scoping mission to Bangladesh and Vietnam that will inform the technical work plan for LEDS support to each of these countries.

III. Scope of Work

The subcontractor is requested to identify, collect, synthesize, organize and analyze country specific information to help inform and guide U.S. multiagency scoping missions to Bangladesh and Vietnam. This information will assist this team in evaluating the specific technical, institutional and capacity needs and gaps to help the host country advance their domestic low emission strategy development and implementation, including sectoral strategies such as a REDD + strategy, energy efficiency or energy sector reform strategy. The contractor shall deliver comprehensive, but concise, briefing books (one each for Bangladesh and Vietnam) providing detailed information on the activities in each country relating to low emission development planning organized in relation to the methodology stages presented in the appendix below. The focus of the reports should be on opportunities to fill gaps in low emission development planning in order to assist Bangladesh and Vietnam in achieving enhanced LEDS capacity. The appendix presents a representative, but not exhaustive, outline presentation of topics expected to be covered in the briefing book. The contractor should organize each book in relation to the LEDS methodology stages presented in the appendix.

Use of maps/graphs/diagrams and other visual aids is encouraged. The main body of each report should not exceed 40 pages and should be comprised primarily of low emission development planning analysis. All supporting data should be included in appendixes. In addition to the written reports the contractor should submit two PowerPoint presentations (one for Vietnam and one for Bangladesh) clearly summarizing the key points of

the analysis. Each presentation should not be longer than 30 slides, should have graphics, creative diagrams, and limited text on each slide, and should have several bullet points summarizing the key points of the slide in the notes section. Referenced materials can be provided in electronic format, such as data tables, technical articles, and country strategies, etc.

IV. Schedule and Deliverables:

Two reports/briefing books, one each for Bangladesh and Vietnam, shall be delivered to USAID on or before **22 October 2010**. The reports are meant to be background documents for follow-up interagency scoping missions that will directly follow this activity, so no extensions of this deadline will be granted. The reports shall be delivered electronically in Microsoft Office Suite format, and in 3 bound, hard copies, as well as 5 CDs or other electronic medium (e.g., memory stick). The PowerPoints should be delivered in electronic format and in color, printed slides. All written deliverables will be submitted in a professional manner and in accordance with USAID branding and 508 compliance requirements (www.usaid.gov/branding). Typographical, grammatical, and syntax errors will be cause for rejection of the deliverables by USAID and shall be corrected at no additional cost to USAID.

Copies or originals of the most relevant materials collected during report preparation shall be delivered with submission of the final report.

The relevant policy experts will be expected to meet with key USAID personnel in **Vietnam** at the beginning of the week of **October 4-8, 2010** and from time-to-time during the week, as needed, to discuss this task. The consultant in Vietnam will meet with the USAID/Vietnam Mission for an exit briefing on **October 8** to summarize preliminary findings.

The relevant policy experts will be expected to meet with key USAID personnel in **Bangladesh** at the beginning of the week of **October 10-14, 2010** (note the work week in Bangladesh is Saturday to Thursday) and from time-to-time during the week, as needed, to discuss this task. The consultant in Bangladesh will meet with the USAID/Bangladesh Mission for an exit briefing on **October 14** to summarize preliminary findings.

The contractor's team will meet with the USAID/Washington and the LEDS Interagency Team in Washington the week of **October 25** to present the final report and key findings for both Bangladesh and Vietnam.

USAID requests the local consultants to coordinate activities with the local USAID Mission point of contact for LEDS, and to contact research institutions, private sector investors, donors and other stakeholders within the

focus's countries climate, energy, landscape, forestry, agricultural, waste and development sectors relevant to climate change mitigation. The consultant is requested to clear all in-country meetings with the local USAID Mission.

V. Functional Labor Requirements

Climate Change Policy Analysis Expert

Energy and Climate Change Analysis Expert

Land-use/Forestry Analysis Expert

Local Expert

Contractors who do not have existing contacts with relevant local experts in Bangladesh and Vietnam can contact USAID for a list of potential in-country experts.

VI. Budget Assumptions

Bangladesh and Vietnam Desk Study research to be completed in the US, followed by approximately one week in each country to gather additional information and interview relevant stakeholders.

Deliverable

As outlined in the Request for Proposals for this effort, the subcontractor is requested to prepare two reports (one each for Bangladesh and Vietnam) that identifies, collects, organizes and analyzes country specific information to help inform and guide U.S. multiagency scoping missions to each country. The reports and supporting information provided will assist this team in evaluating the specific technical, institutional and capacity needs and gaps to help the host country advance their domestic low emission strategy development and implementation. Areas of focus are organized to be consistent with the LEADS methodology that can be found in more detail at: <http://openei.org/LEADS>

Inputs from this pre-mission scoping will help inform the areas of focus for the interagency scoping mission and help provide the foundation for a technical program of work to build capacity and support technical needs in the host country in multiple sectors where there is GHG mitigation potential including energy, agriculture, forestry, land use, and transportation.

Background Analysis (Illustrative Table of Contents)

Identify Relevant Government Actors and Stakeholders

- Identify and recommend individuals for the scoping team to meet with for LEDS work plan development from the following¹:
 - Primary Ministries leading integrated climate planning and policy development
 - Primary technical institutions conducting integrated climate planning and policy analysis or related efforts and sectoral lead institutes
 - Other Ministries with responsibilities and oversight related to GHG mitigation including energy, environment, transportation, forestry, agriculture, etc.
 - Leading NGOs (domestic and international), business, other donors (bilateral and multilateral) or other stakeholders influencing climate and development planning
- Identify companies, business associations and private sector representatives for the scoping team to meet with that can help identify the business interests and challenges in the LEDS space.
- Analysis/Recommendations of a prioritized list of meetings.

Assess Current and Past Programs

- Identify major donors activities in economy wide, national, sub-national and sectoral low emissions development strategies, such as, key reports, key findings or planned initiatives. Detail on specific sectors of focus or other information will be helpful here.
- Identity major country domestic activities in economy wide and sectoral low emissions development strategies, such as, key reports, key findings or planned initiatives. Detail on specific sectors of focus or other information will be helpful here.
- Identify other USG related activities; e.g., USTDA, OPIC, EXIM, Department of Energy, USFS, USEPA, USDA, USAID/RDMA, etc.
- Identify existing inter-ministerial or stakeholder forums related to integrated energy, agriculture, forestry, land use, climate or development planning.
- Review previous and ongoing LEDS related activities and identify specific criteria leading to success/failure of these initiatives.
- Summarize and critically analyze existing LEDS or sectoral strategies (such as a REDD + strategy, energy efficiency or energy sector reform strategy).
- Summary of lessons learned from previous and ongoing LEDS related initiatives (such as a REDD + strategy, energy efficiency or energy sector reform strategy).
- Identify reports, analysis and /or corporate initiatives that examine the business feasibility to reduce emissions and/or incubate new business models that could implement aspects identified in LEDS plans.

Example Country-Specific Information²

Vietnam

- Key Actors: GoV – Climate Change Committee, Ministries of Planning and Investment, Natural Resources and Environment, Agriculture and Rural Development and Industry and Trade; Tech. Orgs. –

¹ Identification of relevant stakeholders for scoping team to meet with will also be informed by the outputs from stages presented in this appendix.

² Examples are provided through out the appendix of relevant country-specific organizations and/or activities that have been identified from calls with USAID missions and from country-specific background research included on OpenEI that may be helpful in identifying specific key documents or organizations that should be included in pre-mission scoping. Further information on activities and organizations identified can be found on this website: <http://openei.org/LEDS>.

UNEP-Risoe, Vietnam Institute of Meteorology, Hydrology and Environment; Donors – ADB, World Bank, UN-REDD, GTZ; USG Agencies – USAID, EPA, FS, DOE, USDA, USGS, National Labs, USG-Vietnam bilateral science and technology agreement

- Key Programs and Documents: National Target Plan for Climate Change, USAID Country Report, UN-REDD documents, Low Carbon Green Growth: Integrated Policy Approach to Climate Change for Asia-Pacific Developing Countries, Vietnam Climate Investment Fund Country Report, UNEP-Risoe Technology Needs Assessment planned activities. For more information please visit: <http://en.openei.org/wiki/Vietnam>.

Bangladesh

- Key Actors: GoB – Ministry of Environment; Tech Orgs – FAO, UNEP-Risoe, SARI; Donors – World Bank, GTZ, UNDP; USG Agencies – USAID, NREL
- Key Programs and Documents: Bangladesh Climate Change Strategy and Action Plan 2009, Bangladesh land-use and energy assessment reports (2009), Renewable Energy Policy of Bangladesh document, UNEP-Risoe Technology Needs Assessment planned activities: <http://en.openei.org/wiki/Bangladesh> .

Determining Reference Scenario

- Identify, collect, analyze and summarize previous LEDS-related domestic activities, such as inventory development, national communications under the United Framework Convention on Climate Change (UNFCCC), emissions scenarios, sectoral studies of mitigation potential, etc.
- Identify key source categories based on most recent national GHG inventory.
- Identify key technical, academic, government, or non-governmental institutions that may have, or have access to, relevant data for reference scenario development. Examples of relevant data include: energy demand and supply, energy access data, land-use data, GHG emissions data by sub-sector, economic and financial indicators, data on future climate conditions, etc.
- Identify potential gaps in available data and scenario development activities and technical organizations that could help address these gaps.
- Provide recommendations on key organizations or individuals that scoping mission should meet with while in-country

Example Country-Specific Information

Vietnam

- Key resources, activities and organizations: UNFCCC emission inventory data, National Target Plan for Climate Change

Bangladesh

- Key resources, activities and organizations: UNFCCC emission inventory data, Bangladesh Climate Change Strategy and Action Plan 2009

Assessing Potential and Establishing Goals

- Identify development and climate impacts that are country priorities through reviewing national development and climate plans
- Identify reports on public and private sector capacity as well as country-specific barriers to low emission development in relation to land-use and energy
 - Policy, legal and regulatory barriers; including clean air regulations and enforcement
 - Institutional Capacity (Utilities, Regulators, etc)
 - Other (Financing, import tariffs, cost recovery, etc)
- Assess current status of renewable energy sources (existing installed capacity, planned projects, resource assessments, market assessments, etc) and energy efficiency, such as power plant efficiencies, T&D system losses, industrial plant norms, and any efficiency programs (national or state)
- Identify and analyze energy technology cost and characterization data available for the country or other applicable data sets.
- Identify and analyze current land-use practices, policies, resource and market assessments and initiatives to support sustainable land-use, and forest management
- Identify and analyze multi-sector marginal abatement cost curves that may have been developed for the country in key sectors including energy, agriculture, forestry, land use, transportation, and industrial.
- Identify key technical, academic, government, or non-governmental institutions that have been involved in the activities outlined above.
- Identify potential gaps in available data and/or techno-economic and market assessments and activities identified and technical organizations that could help address these gaps.
- Provide recommendations on key organizations or individuals that scoping mission should meet with while in-country

Example Country-Specific Information

Vietnam

- Key resources, activities and organizations: Vietnam-USAID Country Report, NREL biomass resource assessments, REDD program resources, UNEP-Risoe Technology Needs Assessment planned activities

Bangladesh

- Key resources, activities and organizations: NREL Geospatial Toolkit for Bangladesh, DLR renewable energy resource assessments, UNEP-Risoe Technology Needs Assessment planned activities

Pathways Analysis

- Identify and analyze technology or policy roadmaps developed specifically for the country or roadmaps that can be applied.
- Identify and describe data available for low emission pathways analysis modeling activities, e.g. technology cost and characterizations, energy supply and demand, emission inventory and emission factors (data inputs likely identified in previous steps), land use policy and programs
- Identify and describe modeling activities or cost benefit analysis to analyze deployment pathways across sectors to reduce GHG emissions (e.g., MARKAL modeling).

- Identify and describe co-benefits (e.g., environmental, energy security, economic, health) analysis activities related to different energy and land-use initiatives.
- Identify key technical, academic, government, or non-governmental institutions that have been involved in the activities outlined above.
- Identify potential gaps in available data and/or modeling activities (potentially need for model comparison) identified and technical organizations that could help address these gaps.
- Provide recommendations on key organizations or individuals that scoping mission should meet with while in-country

Example Country-Specific Information

Vietnam

- Key resources, activities and organizations: UNEP-Risoe Technology Needs Assessment planned activities, ETSAP-MARKAL resources.

Bangladesh

- Key resources, activities and organizations: UNEP-Risoe Technology Needs Assessment planned activities, ETSAP-MARKAL resources.

Evaluating and Selecting Policies

- Identify and describe current relevant climate, energy, and agriculture, forestry, and land use policies and regulations and specific barriers the policies are addressing (e.g. renewable energy feed-in tariffs, power plant emissions controls, vehicle efficiency standards, appliance standards, building codes, agriculture subsidies, land zoning regulations, land tenure, etc.).
- Identify and describe policy impact assessment activities related to low emission planning, e.g. econometric modeling of macroeconomic impacts such as employment and GDP.
- Identify data availability to perform policy impact assessment; e.g., input-output table.
- Identify key technical, academic, government, or non-governmental institutions that have been involved in the activities outlined above.
- Identify potential gaps in available data and/or impact analysis activities identified and technical organizations that could help address these gaps.
- Provide recommendations on key organizations or individuals that scoping mission should meet with while in-country

Example Country-Specific Information

Vietnam

- Key resources, activities and organizations: Policy databases (IEA, REEEP, Low Carbon World), Low Carbon Green Growth: Integrated Policy Approach to Climate Change for Asia-Pacific Developing Countries, REDD Program resources

Bangladesh

Key resources, activities and organizations: Policy databases (IEA, REEEP, Low Carbon World), FAO – A Synthesis of Agricultural Policies in Bangladesh, DFID Policies for Low Carbon Growth document, UNEP – Policy Agenda for Addressing Climate Change in Bangladesh

Preparing and Implementing Plans

- In cases where low emission development plans have been developed identify which actions are actually being implemented. In cases where certain actions are not being implemented, identify the barriers to action and which agencies could facilitate the process (implementation gap analysis).
- Identify degree to which current low emission planning activities (if applicable) are specific and measurable and provide insights on protocols used to measure that impact.
- Identify stakeholder review and engagement process in place for low emission plan (if applicable)
- Determine the degree of ongoing high level government involvement in ensuring that a current low emission plan reaches full implementation (where applicable).
- Identify current monitoring and review process for current low emission development plan (where applicable).
- Identify illustrative, high potential or existing public-private partnerships to facilitate implementation process.
- Identify international and domestic finance available to support implementation.
- Identify level of private sector participation in planning process and relevant entities that could facilitate the implementation process.
- Identify key institutions that have been involved in the activities outlined above.
- Provide recommendations on key organizations or individuals that scoping mission should meet with while in-country.

Example Country-Specific Information

Vietnam

- National Target Plan for Climate Change, World Bank – Climate Investment Fund Country Report
- Vietnam inscription to the Copenhagen Accord

Bangladesh

- Bangladesh Climate Change Strategy and Action Plan
- Bangladesh Alliance Assessment
- Bangladesh inscription to the Copenhagen Accord

LOW EMISSION DEVELOPMENT STRATEGY PRE-SCOPING MISSION ASSESSMENT– BANGLADESH

October 2010

CHAPTER I – CONTEXT AND APPROACH

BACKGROUND

Developing countries are amongst the most vulnerable in the world to climate change. As a cross-cutting stressor on human and natural systems, climate change will exacerbate existing economic, social, and governance stresses, adding an additional challenge to the achievement of development priorities such as economic development, sustainable management of natural resources, and poverty alleviation. However, it may also offer opportunities for countries to stimulate employment and attract greater investment and financial flows through carbon markets. Addressing the challenges and leveraging the opportunities associated with climate change and development will require shifts in thought and behavior, capacity and resources, as well as creative methodologies and approaches. To reduce their vulnerability, leverage their potential role in mitigating greenhouse gas (GHG) emissions, and support long-term climate-resilient development, the United States Agency for International Development (USAID) Global Climate Change (GCC) Program, in coordination with other US government (USG) agencies and international partners, has developed a methodology for low-emissions development strategies (LEDS) in select partner countries. LEDS are geared to the pursuit of development pathways that enhance countries' resilience to climate change, reduce GHG emissions over the long term, and provide opportunities to promote employment and investment flows through access to carbon markets. In recognition of the necessarily country-specific nature of a LEDS, USAID's GCC team has commissioned a series of assessments to be conducted in priority countries, including in Bangladesh and Vietnam.

OBJECTIVES

The objective of this assessment is to conduct and summarize in a report an analysis of the priority technical, institutional, and capacity needs and gaps related to LEDS development and implementation in Bangladesh. This report will be used to inform and guide a U.S. Inter-Agency Scoping Team (IAST) in its evaluation of the key LEDS-related needs and gaps in Bangladesh. The IAST's findings and recommendations will provide the basis for further U.S. engagement with and support to countries for the development and implementation of LEDS. Although it is meant primarily for the IAST, this pre-scoping assessment report may also serve as a useful reference for other USG entities, bilateral donors, multilateral development banks, and other development partners.

Drawing on an extensive review of official documents and other literature as well as in-country consultations in Dhaka from October 4-7, 2010, this report seeks to address the following questions:

What are the priority technical, institutional, policy, capacity, and data needs and gaps for the development and implementation of a LEDS in Bangladesh, and the potential opportunities for USAID?

Based on lessons learned from past initiatives, strategies, or plans, including those that are specific to relevant areas such as REDD+ or energy efficiency, what are the key considerations for the development of a LEDS in Bangladesh? Who are the key people to meet with in regard to a LEDS?

METHODS

The Assessment Process consisted of two main components, a comprehensive desktop study and consultations. The desktop study was carried out based on an extensive literature review (see Annex 1 for the list of documents) and consultation notes, where available. Source material included official documents

such as national development and climate change strategies, Poverty Reduction Strategy Papers (PRSP), other reports and papers, and academic articles. Consultations were held with 35 individuals from USAID (GCC team and Bangladesh mission), other USG agencies, multilateral development banks, bilateral donors, technical and research institutes, and private sector companies. Government of Bangladesh (GoB) officials were specifically excluded from this assessment. (See Annex 2 for a list of participants.) While consultations with USG agencies and those with key stakeholders took place at the front and back ends of the process respectively, the desktop review was conducted throughout the assessment. An iterative process was used, so that the desktop review was used to conduct an initial gap analysis of references, initiatives, strategies, policies, and data, which informed consultations. The information gathered through consultations was then used to further refine and augment the desktop review to ensure it was as current and complete as possible.

OUTLINE

The report is structured to follow the LEDS methodology, and Chapter 2 provides an overview of the country's location and geography, population, economy, government and politics, and foreign relations. Chapter 3 provides a summary of LEDS-relevant activities and initiatives that have been undertaken by GoB, multilateral and bilateral donors, technical and research institutes, NGOs, and the private sector. In Chapter 4, we describe previous and existing efforts relevant to the establishment of reference scenario, including the key source categories in the first and most recent GHG inventory, conducted as part of the country's Initial National Communication (INC) under the United Nations Framework Convention on Climate Change (UNFCCC), and assessments of mitigation options and potential. In Chapter 5, we summarize priority development objectives and climate change impacts, followed by a discussion of studies on public and private sector capacity to achieve the objectives. The remainder of the chapter looks at the current status of renewable energy sources, energy efficiency, and land use policies and practices, and the key technical, academic, and government institutions. Chapter 6 examines the policy landscape and pathways analysis activities. Finally, in Chapter 7, we summarize the key findings of the report and provide a series of recommendations to the three questions the report seeks to address

To view entire report visit: <http://portal.usaidallnet.gov/documents/1039>

**LOW EMISSION
DEVELOPMENT STRATEGY
PRE-SCOPING MISSION
ASSESSMENT – VIETNAM**

OCTOBER 2010

CHAPTER I – INTRODUCTION: CONTEXT AND APPROACH

BACKGROUND

Developing countries are amongst the most vulnerable in the world to climate change. As a cross-cutting stressor on human and natural systems, climate change will exacerbate existing economic, social, and governance stresses, adding an additional challenge to the achievement of development priorities such as economic development, sustainable management of natural resources, and poverty alleviation. However, it may also offer opportunities for countries to stimulate employment and attract greater investment and financial flows through carbon markets. Addressing the challenges and leveraging the opportunities associated with climate change and development will require shifts in thought and behavior, capacity and resources, and creative methodologies and approaches. To this end, the United States Agency for International Development (USAID) Global Climate Change (GCC) Program, in coordination with other US Government (USG) agencies and international partners, has developed a methodology for low-emissions development strategies (LEDS) in select partner countries. LEDS are geared to the pursuit of development pathways that enhance countries' resilience to climate change, reduce GHG emissions over the long-term, and provide opportunities to promote employment and investment flows through access to carbon markets. In recognition of the necessarily country-specific nature of a LEDS, USAID's GCC Team has commissioned a series of pre-scoping assessments to be conducted in priority countries, including in Bangladesh and Vietnam.

OBJECTIVES

The objective of the assessment is to conduct and summarize in a report an analysis of the priority technical, institutional, and capacity needs and gaps related to LEDS development and implementation in Vietnam. This report will be used to inform and guide a U.S. Inter-Agency Scoping Team (IAST) in their evaluation of the key LEDS-related needs and gaps in Vietnam. Their findings and recommendations will provide the basis for further U.S. engagement with and support to countries for the development and implementation of LEDS. Although it is meant primarily for the IAST, it may also serve as a useful reference for other USG entities, bilateral donors, multilateral development banks, and other development partners.

Drawing on an extensive review of official documents and other literature as well as in-country consultations in Hanoi from October 11-15, 2010, this report seeks to address the following questions: What are the priority technical, institutional, policy, capacity, and data needs and gaps for the development and implementation of a LEDS in Vietnam, and the potential opportunities for USAID?

Based on lessons learned from past initiatives, strategies, or plans, including those that are specific to relevant areas such as REDD+ (Reduced Emissions from Deforestation and Degradation) or energy efficiency, what are the key considerations for and barriers to the development of a LEDS in Vietnam? Who are the key people to meet with in regard to a LEDS?

METHODS

The Assessment Process consisted of two main components, a comprehensive desktop study and consultations. The desktop study was carried out based on an extensive literature review (see Annex 1 for the list of documents) and consultation notes, where available. Source material included official documents such as national development and climate change strategies, Poverty Reduction Strategy Papers (PRSP), other reports and papers, and academic articles. 23 consultations were held with 55 individuals from USAID (GCC team and Vietnam mission), other USG agencies, multilateral development banks, bilateral donors, technical and research institutes, and private sector companies. (See Annex 2 for a list of participants.) While consultations with USG agencies and those with key stakeholders took place at the front and back ends respectively of the process, the desktop review was conducted throughout the assessment. An iterative process was used, so that the desktop review was used to conduct an initial gap analysis of references, initiatives, strategies, policies, and data, which informed consultations. The information gathered through consultations was then used to further refine and augment the desktop review to ensure it was as up-to-date and complete as possible.

OUTLINE

The report is structured to follow the LEDS methodology, and Chapter 2 provides an overview of the country's location and geography, population, economy, government and politics, and foreign relations. Chapter 3 provides a summary of LEDS-relevant activities and initiatives that have been undertaken by GoB, multilateral and bilateral donors, technical and research institutes, NGOs, and the private sector. In Chapter 4, we describe previous and existing efforts relevant to the establishment of reference scenario, including the key source categories in the first and most recent GHG inventory, conducted as part of the country's Initial National Communication (INC) under the United Nations Framework Convention on Climate Change (UNFCCC), and assessments of mitigation options and potential. In Chapter 5, we summarize priority development objectives and climate change impacts, followed by a discussion of studies on public and private sector capacity to achieve the objectives. The remainder of the chapter looks at the current status of renewable energy sources, energy efficiency, and land use policies and practices, and the key technical, academic, and government institutions. Chapter 6 examines the policy landscape and pathways analysis activities. Finally, in Chapter 7, we summarize the key findings of the report and provide a series of recommendations to the three questions the report seeks to address

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LEDS-Mexico Mission (28th February – 4th March 2011)

MONDAY 28 - FEB				
Time	Topic and contents	VENUE	USG participants	Counterparts
08:00 – 09:00	Security briefing: Surviving in Mexico City	<i>USAID/Mexico</i>	Jason Kephart* , RSO LEDS-Mexico Mission team*	None
09:00 – 09:30	Introductory meeting with USAID/Mexico Mission Director	<i>USAID/Mexico</i>	Kenneth Ellis* , USAID/Mexico Mission Director Elizabeth Wolfson* , ESTH Counselor, State Department Kevin McGlothlin* , USAID/Mexico ENV LEDS-Mexico Mission team*	None
11:00 – 15:00 (see detailed agenda)	Protocolary introductory meeting of the LEDS Mexico Mission	<i>Sala Mario Molina, SEMARNAT's HQ</i>	Kenneth Ellis* , USAID/Mexico Mission Director Elizabeth Wolfson* , ESTH Counselor, State Department Kevin McGlothlin* , USAID/Mexico ENV LEDS-Mexico Mission team*	Ing. Sandra Herrera* , Under-Secretary for Environmental Regulation and Promotion, SEMARNAT Lic. Enrique Lendo* , Head of the International Affairs Office, SEMARNAT Dr. Juan Mata* , Director General for Climate Change Policies, SEMARNAT Lic. Roberto Cabral* , Director General for Strategic Financing, SEMARNAT
	a) Meeting with GOM Environmental agencies	<i>Sala Mario Molina, SEMARNAT's HQ</i>	Elizabeth Wolfson* , ESTH Counselor, State Department Kevin McGlothlin* , USAID/Mexico ENV LEDS-Mexico Mission team*	GOM's Environmental Agencies: SEMARNAT/Planning SEMARNAT/Promotion SEMARNAT/Environmental

				Management SEMARNAT/International Affairs National Commissions for Forests (CONAFOR), protected areas (CONANP), water (CONAGUA), and biodiversity (CONABIO) The National Institute for Ecology (INE) Ministry of Foreign Affairs (SRE)
16:00 – 17:30	Meeting with The World Bank - Mexico	<i>WB-México (Insurgentes Sur 1605, 24th Floor Col. San José Insurgentes, 03900, México D.F. Tel. +52 (55) 5480 4200)</i>	LEDS-Mexico Mission team*	Ricardo Hernandez Murillo* , Senior Environmental Specialist LCSEN, The World Bank – Mexico
17:00 – 20:00	Stock-taking meeting	<i>Hotel Marriott Reforma</i>	LEDS-Mexico Mission team*	None

TUESDAY 01- MARCH

Time	Topic and contents	VENUE	USG participants	Counterparts
9:00 – 11:50 <u>(see detailed agenda)</u>	MITIGATION a) Presentation of the LEDS initiative to CICC's Mitigation working group b) Presentation on the GOM's PECC and Mid-term vision on GCC (advances,	<i>Sala Mario Molina, SEMARNAT's HQ</i>	LEDS-Mexico Mission team (in part)*	Mitigation Working Group of the GOM's Interministerial Commission on Climate Change: Ministries of Transport and Communications (SCT), Agriculture (SAGARPA), Economy (SE), Social Development (SEDESOL),

	<p><i>future work, and needs)</i></p> <p>c) Presentations on <i>Sectoral GCC programs (advances, future work, and needs)</i></p> <p>d) Exchange: <i>Identifying opportunities for collaboration on LEDS</i></p>			Environment (SEMARNAT) and Energy (SENER, CFE, PEMEX, FIDE, CRE)
11:30 – 12:30	Meeting with IADB-Mexico	<i>IADB-Mexico office (Reforma #222 Piso 11, Col. Juárez)</i>	LEDS-Mexico Mission team (in part)*	Dolores Barrientos* , Inder Rivera* ; Especialista Regional de la Unidad de Energía Sustentable y Cambio Climático; IADB
12:00 - 14:50 (see detailed agenda)	PRIVATE SECTOR	<i>Sala Mario Molina, SEMARNAT's HQ</i>	LEDS-Mexico Mission team*	Private Sector Working Group of the GOM's Interministerial Commission on Climate Change:: Ministries of Economy (SE), Finances (SHCP), Energy (SENER), Environment (SEMARNAT) and representatives from Private Sector (<i>CCE-CESPEDES</i>) Ministry of Foreign Affairs (SRE)
	<p>a) Presentation of the LEDS initiative to representatives from Private Sector</p> <p>b) Presentation on <i>Mitigation actions by the Private Sector in Mexico (advances, future work, and needs)</i></p> <p>c) Exchange: <i>Identifying opportunities for</i></p>			

	<i>collaboration on LEDS</i>			
16:00 – 17:30	Meeting with the European Union’s Mexico Delegation	<i>European Union office (Paseo de la Reforma 1675, Lomas de Chapultepec, 11000 México DF. Tel.: +52(55)5540-3345 x 240</i>	LEDS-Mexico Mission team*	Anna Jonsson* , First Secretary, Delegation in Mexico of the European Union
17:00 – 20:00	Stock-taking meeting	<i>Hotel Marriott Reforma</i>	LEDS-Mexico Mission team*	None

WEDNESDAY 02- MARCH

Time	Topic and contents	VENUE	USG participants	Counterparts
09:00 – 10:45 <u>(see detailed agenda)</u>	<p>REDD+</p> <p>a) Presentation of the LEDS initiative to CICC’s REDD+ working group</p> <p>b) Presentation of <i>Mexico’s Vision for REDD+</i></p> <p>c) Exchange: <i>Identifying opportunities for collaboration on LEDS</i></p>	<i>CECAL, SEMARNAT-San Jerónimo</i>	Rebecca, Andrea, Adam, Collin, Jeff, Salvador, Christine, Alexia, Margee, Mike, Susan, Kevin, and either John or Sarah	REDD+ Working Group of the GOM’s Interministerial Commission on Climate Change: SEMARNAT, CONAFOR, CONANP, INE
11:30 – 13:30 <u>(see detailed agenda)</u>	<p>ADAPTATION</p> <p>a) Presentation of the LEDS initiative to CICC’s Adaptation working group</p> <p>b) Presentation of <i>GOM’s Mid-term Adaptation Policy framework</i></p> <p>c) Exchange: <i>Identifying</i></p>	<i>CECAL, SEMARNAT-San Jerónimo</i>	Rebecca, Andrea, Adam, Collin, Jeff, Salvador, Christine, Alexia, Margee, Mike, Susan, Kevin, and either John or Sarah	Adaptation Working Group of the GOM’s Interministerial Commission on Climate Change: Ministries of the Interior (SEGOB), Agriculture (SAGARPA) Public Health (SALUD), and Environment (SEMARNAT, INE)

	<i>opportunities for collaboration</i>			
12:30 – 14:00	Reunion avec l'Agence France de Developpement (Afd)	<i>Agence France de Developpement (Torre Omega, Campos Eliseos No. 345, 5º piso, Polanco)</i>	Liz Wolfson, Ashley, Bella, either John or Sarah	Beatriz Vaca Domínguez Institutional Relations, Agence France de Developpement (Afd), Tel. 5281-1777 ext. 103
Post-13:30 (TBC)	REDD follow-up	<i>SEMARNAT-San Jerónimo</i>	Rebecca, Andrea, Christine, Margee, Adam	TBD
16:00 – 17:30	Versammlung mit die Deutsche Gesellschaft für Internationale Zusammenarbeit	<i>GIZ-Mexico office (Torre Hemicor, Piso 11, Av. Insurgentes Sur No. 826, Col. del Valle, 03100, México, D.F. Tel: +52 55 55 36 23 44)</i>	Alexia, Ashley, Bella, Liz Wolfson	Mr Jan Peter Schemmel* , GIZ-Mexico Country Director
17:00 - ?	SENER	<i>TBD</i>	John, Sarah, (mission participant?)	TBD
19:00 (TBD)	CONAFOR	<i>TBD</i>	Rebecca, Margee, Andrea, Christine, Adam	TBD

THURSDAY 03- MARCH

Time	Topic and contents	VENUE	USG participants	Counterparts
09:00 – 10:30	Meeting with the British Embassy	<i>The British Embassy in Mexico (Río Lerma, No. 71 Col. Cuauhtémoc, 06500, México DF; Tel: +52 (55) 1670 3200)</i>	Adam, Ashley, Alexia, Jeff	Stephen Lysaght* , First Secretary, Climate Change and Sustainable Development Teresa Tattersfield* , Climate change officer
10:30-?	Roberto Cabral & UNAM	<i>TBD</i>	Bella, John, Collin (TRANSLATOR)	Roberto Cabral & TBD
11 or 11:30 - ? (TBD)	Academia	<i>UNAM</i>	Mike, Sarah, potentially others	Dr. Gay, Amparo Martinez, Jorge

				Garca, and rep from Centro Mario Molina (TBC)
13:00 - ? (TBC)	AMDEE & AMES	TBD	John, Bella, Jeff (TRANSLATOR?)	Jorge, Vicente Estrada
14:00-?	ODON de buen	His office	Mike, Sarah	Odon
16:00 - ? (TBC)	SET (Transport)	TBD	Mike, Sarah	TBD
ALL DAY (TBC)	Conafor	Guadalajara	Rebecca, Andrea, Christine, Margee	TBD
18:30 – 20:00	Stock-taking meeting	Hotel Marriott Reforma	LEDS-Mexico Mission team*	None

FRIDAY 04- MARCH

Time	Topic and contents	VENUE	USG participants	Counterparts
09:00 – 10:00	Outbriefing meeting with USAID/Mexico Mission Director	USAID/Mexico	Kenneth Ellis*, USAID/Mexico Mission Director Elizabeth Wolfson*, ESTH Counselor, State Department Kevin McGlothlin*, USAID/Mexico ENV LEDS-Mexico Mission team*	None
11:30	CONUEE		Andrea, Bella? Translator:	
1:30 - ?	Outbriefing with SEMARNAT		Alexia, Collin, Mike, Bella, Rebecca, John, Christine? Translator:	
16:00 - ?	Pemex	Marina Nacional 329 Torre Ejecutiva, Piso 12 Col. Petroleos Mexicanos CP 11311	Mike, John, Eleanor Fox Translator:	Edgar Perea Ph. 1944 2500 x57744
16:00 – 17:30 (TBC)	UNDP	TBD	Ashley, Alexia, Rebecca, Sarah	TBD
17:30 – 19:00	Stock-taking meeting	Hotel Marriott Reforma	LEDS-Mexico Mission team*	None
19:30 – 03:00	Farewell party (tbc)	Tbd	LEDS-Mexico Mission team*	None

**U.S. Government Inter-Agency Low Emission Development Strategies (LEDS) Scoping
Mission to Vietnam: November 1 – 5, 2010**

Monday, November 1

11:00 – 12:00	In-brief with Embassy and Mission	US Embassy 7 Lang Ha	Collin Green, Alexia Kelly, Dan Rochberg, Dan Milstein, Dan Bilello, Kate Cardamone, Anastasia De Santos, Jennifer Leisch, Sharon Hsu, Kristen Madler, Darcy Nelson, Bart Lounsbury, Frank Donovan, Howard Handler, Eric Frater, Jeanne Bailey, John Kastning
13:30 – 15:00	Meeting with MONRE POC: Le Anh Ngoc (Ms.) Official Department of International Cooperation Ministry of Natural Resources and Environment No. 83 Nguyen Chi Thanh Street, Ha Noi, Viet Nam Tel/fax: +84 43 8357929 Email: langoc@monre.gov.vn/leanhngoc2006@gmail.com	Ministry of Natural Resources and Environment 83 Nguyen Chi Thanh	Collin Green, Alexia Kelly, Dan Rochberg, Dan Bilello, Kate Cardamone, Frank Donovan, Howard Handler, Eric Frater

Tuesday, November 2

09:00 – 10:30	Meeting with MPI POC: Nguyen Thi Dieu Trinh (Ms.)	Ministry of Planning and Investment - MPI	Collin Green, Alexia Kelly, Dan Rochberg, Dan Bilello, Anastasia De Santos, Frank Donovan, Howard Handler,
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	<p>Official</p> <p>Department of Science, Education, Natural Resources and Environment -DSENRE</p> <p>Ministry of Planning and Investment - MPI</p> <p>6 B Hoang Dieu str., Ba Dinh dist.</p> <p>HANOI , Vietnam</p> <p>Tel: 84-8043310</p> <p>Fax: 84-4-37339912</p> <p>Mob: 84-904886176</p> <p>Email: dieutrinh@mpi.gov.vn and/or dieutrinh2b@yahoo.com</p> <p>www.mpi.gov.vn</p>	2 Hoang Van Thu	Eric Frater
11:00 – 12:00	<p>Meeting with MOST</p> <p>POC: Mr. Đinh Việt Dũng</p> <p>America and The South Pacific Division, International Cooperation Department</p> <p>Ministry of Science and Technology (MOST)</p> <p>39 Trần Hưng Đạo, Hà Nội, Vietnam</p> <p>Tel: +84 (4) 38228751 or 39436688</p> <p>Fax: +84 (4) 39439987</p> <p>Mobile: +84 904868693</p> <p>Email: dungdv@most.gov.vn</p>	<p>Ministry of Science and Technology (MOST)</p> <p>39 Trần Hưng Đạo</p>	Collin Green, Alexia Kelly, Dan Milstein, Dan Bilello, Anastasia De Santos, Jennifer Leisch, Frank Donovan, Howard Handler, Eric Frater
14:00 – 15:00	<p>Meeting with DFID and World Bank</p> <p>POC:</p> <p>Mr. Nguyen Van Kien</p>	<p>British Embassy</p> <p>7th Floor, Central Bld, No. 31 Hai Ba</p>	Collin Green, Alexia Kelly, Dan Milstein, Dan Bilello, Kate Cardamone, Anastasia De Santos, Jennifer Leisch, Sharon Hsu, Kristen Madler, Darcy Nelson, Bart

	<p>Climate Change Adviser, DFID</p> <p>British Embassy</p> <p>7th Floor, Central Bld, No. 31 Hai Ba Trung Str., Hanoi</p> <p>Tel: +84 43 936 0555, ...0584</p> <p>Mobile: +84 90 485 9388</p> <p>Email: nv-kien@dfid.gov.uk</p> <p>Mr. Douglas Graham</p> <p>Environment Country Sector Coordinator in Viet Nam</p> <p>World Bank</p> <p>Mobile: +84 913 205 304</p> <p>Email: dgraham@worldbank.org</p>	<p>Trung Str., Hanoi</p>	<p>Lounsbury, Howard Handler, Eric Frater,</p>
<p>15:30 – 17:00</p>	<p>Meeting with MARD</p> <p>Mr. Lương Thế Phiệt</p> <p>Acting Director General, International Cooperation Dept</p> <p>Ministry of Agriculture and Rural Development (MARD)</p> <p>No. 2 Ngọc Hà St., Ba Đình District, Hà Nội, Vietnam</p> <p>Tel: +84 (4) 38437520</p> <p>Fax: +84 (4) 37330752</p> <p>Mobile: +84 (4) 1213745769</p> <p>Mobile: phiet_luong@yahoo.com</p>	<p>Ministry of Agriculture and Rural Development (MARD)</p> <p>No. 2 Ngọc Hà</p>	<p>Collin Green, Alexia Kelly, Dan Rochberg, Dan Bilello, Darcy Nelson, Howard Handler, Eric Frater, Jeanne Bailey</p>

Wednesday, November 3

9:00 – 12:00 – 12:00: 00 11:00	Roundtable discussion on Climate Change and LEDS with CCWG, NGOs, UN, Donors, GVN ministries	Melia Hotel 44 Ly Thuong Kiet Str., Hanoi	Collin Green, Alexia Kelly, Dan Bilello, Kate Cardamone, Anastasia De Santos, Jennifer Leisch, Sharon Hsu, Kristen Madler, Darcy Nelson, Bart Lounsbury, Howard Handler, Eric Frater
9:00 -	Meeting with MOC	Ministry of Construction - MOC	Collin Green, Dan Rochberg, Dan Milstein, Dan Bilello, Anastasia De Santos, Jennifer Leisch, Frank Donovan
13:00 – 14:00	Greenhouse gas inventories meeting with JICA POC: Ms. Takako Ono, JICA Chief Advisor Mobile: +84 9-8622-5200 Email: ono.takako.11@gmail.com		Kate Cardamone, Darcy Nelson
14:00 – 16:00	Roundtable discussion on Low Emission Energy with NGOs, Donors, Private Sector, GVN ministries	Melia Hotel 44 Ly Thuong Kiet Str., Hanoi	Collin Green, Alexia Kelly, Dan Rochberg, Dan Milstein, Dan Bilello, Kate Cardamone, Anastasia De Santos, Jennifer Leisch, Sharon Hsu, Kristen Madler, Darcy Nelson, Bart Lounsbury, Howard Handler, Eric Frater
14:00 – 16:00	Roundtable discussion on Forestry and Ag with NGOs, Donors, Private Sector, GVN ministries	Melia Hotel 44 Ly Thuong Kiet Str., Hanoi	Collin Green, Alexia Kelly, Darcy Nelson, Bart Lounsbury, Jeanne Bailey
14:00- 15:00	Meeting with the Vietnam Association of Foreign Invested Enterprises	65 Van Mieu, Hanoi	Anastasia de Santos

	Mr. Hoang Van Huan		
14:00 – 16:00	<p>MONRE</p> <p>Vietnam Institute of Meteorology, Hydrology and Environment (IMHE), Department of Science, Training, and International Cooperation</p> <p>Dr Nguyen Van Thang (nvthang@vkttv.edu.vn), Dr Nguyen Thi Hien Thuan (hienthuan@vkttv.edu.vn; hienthuan@yahoo.com), Dr. Mai Khiem (maikhiem77@gmail.com).</p> <p>IMHE, Climate Change Division</p> <p>Mr. Hoang Manh Hoa, Director. vnccoffice@fpt.vn</p>		Kate Cardamone, Bob Winterbottom,
15:30- 16:30	<p>Vietnam Standard and Consumer Association</p> <p>Mr. Do Gia Phan</p>	214/22 Ton That Tung, Hanoi	Anastasia De Santos

Thursday, November 4

09:00 – 12:00	<p>Roundtable discussion on Low Emission Infrastructure Development with Donors, UN, IFIs, and GVN ministries</p>		Collin Green, Dan Rochberg, Dan Bilello, Sharon Hsu, Kristen Madler, Howard Handler,
10:00- 11:00	<p>Meeting with IOE</p> <p>Institute of Energy: Nguyen Anh Tuan, Deputy Director; Nguyen Van Thong, International Cooperation Department</p>	Institute of Energy – IOE	Dan Milstein, DOE; Kate Cardamone, EPA; John Kastning, U.S. Embassy-Hanoi
12:00- 1:00	<p>U.S.-Vietnam Trade Council (USVTC)</p> <p>Bob Schiffer</p>	Low Carbon Vietnam 2020	Dan Rochberg, Anastasia De Santos

13:30 – 14:30	<p>Meeting with EU Delegation to Vietnam, Cooperation Section</p> <p>POC:</p> <p>Mr. Robert Hynderick de Theulegoet</p> <p>Coordinator, Social Sectors and the Environment, Cooperation Section</p> <p>Tel: 04-3941-0099 ext. 8302</p> <p>Email: robert.hynderick-de-theulegoet@ec.europa.eu</p> <p>Mr. Hoang Thanh, Program Officer, Rural Development & Environment, Cooperation Section</p> <p>Tel: +84-43-9410099 ext 8216</p> <p>Email: thanh.hoang@ec.europa.eu</p>		Collin Green, Alexia Kelly, Dan Rochberg, Bart Lounsbury
13:30- 14:30	<p>Meeting with the Development Policies and Research Center</p> <p>Dr Nguyen Duc Nhat</p>	Rooms 6-8- 9, 2nd floor, 216 Tran Quang Khai, Hoan Kiem district, Hanoi, Vietnam	Anastasia de Santos
14:00 – 16:00	<p>MONRE</p> <p>ISPONRE</p> <p>Dr. Nguyen Van Tai, Director General, nvtai@isponre.gov.vn</p> <p>Ass. Prof. Dr. Nguyen The Chinh, Deputy General Director, ntchinh@isponre.gov.vn, Ms. Nguyen Thi Thuy Duong, Department of Economics, nttduong@gmail.com</p>	Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE)	Kate Cardamone
15:00 –	Meeting with Danish Embassy/DANIDA	EU Delegation	Collin Green, Alexia Kelly, Dan Rochberg, Dan Bilello,

16:30	<p>POC:</p> <p>Mr. Lasse Melgaard, Counselor Development</p> <p>Environment, Climate Change and Mekong River Commission</p> <p>Mobile: +84 913 270 371</p> <p>Email: lasrael@um.dk</p> <p>Ms. Tran Hong Viet, CC Program Manager</p> <p>Environment, Climate Change and Mekong River Commission</p> <p>Tel: +84-43-823 1888 ext 114</p> <p>Mobile: +84 913 525 511</p> <p>thviet@um.dk</p>	<p>to Vietnam</p> <p>17-18 Flr Pacific Palace 83B Ly Thuong Kiet Str.</p>	<p>Sharon Hsu, Kristen Madler, Howard Handler, Bart Lounsbury</p>
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Friday, November 5

09:00 – 10:30	<p>Meeting with MOIT</p> <p>POC: Ms. Phạm Hoài Linh</p> <p>International Cooperation Department</p> <p>Ministry of Industry and Trade</p> <p>54 Hai Bà Trưng</p> <p>Tel: +84 (4) 22202359</p> <p>Fax: +84 (4) 22202356</p> <p>Mobile: +84 976757565</p> <p>Email: linhphh@moit.gov.vn</p>	<p>Ministry of Industry and Trade</p> <p>54 Hai Bà Trưng</p>	<p>Collin Green, Alexia Kelly, Dan Bilello, Sharon Hsu, Dan Milstein, Howard Handler, Frank Donovan, Eric Frater</p>
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10:00 – 11:00	Meeting with CARE		Bob Winterbottom, Bart Lounsbury
11:00 – 12:00	Exit brief with Embassy and Mission	US Embassy 7 Lang Ha	Collin Green, Alexia Kelly, Dan Milstein, Dan Bilello, Kate Cardamone, Anastasia De Santos, Jennifer Leisch, Sharon Hsu, Kristen Madler, Darcy Nelson, Bob Winterbottom, Bart Lounsbury, Frank Donovan, Howard Handler, Eric Frater, Jeanne Bailey, John Kastning, Virginia E. Palmer
14:00 – 15:30	Meeting with KFW and GTZ POC: Dr. Günter Riethmacher, Country Director, GTZ Office Hanoi Tel: +84 4 393449-51/ Fax: +84 4 393449-50 Email: guenter.riethmacher@gtz.de Ms. Birgit Erbel, Director, KFW Vietnam Tel: +844 3934 5355 Email: birgit.erbel@kfw.de	KFW/GTZ Office 6th Floor, Hanoi Towers 49 Hai Ba Trung St., Hanoi	Dan Rochberg, Alexia Kelly Collin Green, Kristen Madler, Sharon Hsu, Darcy Nelson, Bob Winterbottom, Dan Bilello, Anastasia De Santos
15:45 – 17:00	Meeting with Agence Francaise de Development POC: Mr. Alain Henry, Director Tel : +84 4 3 823 67 64 Fax : +84 4 3 823 63 96 Email: afdhanoi@afd.fr	AFD Hanoi 6-8 Ton That Thiep, Ba Dinh, Hanoi	Dan Rochberg, Alexia Kelly Collin Green, Howard Handler, Bart Lounsbury

**Enhancing Capacity for Low Emission Development Strategies (EC-LEDS):
Scoping Assessment Report Outline**

Purpose: This document is an outline for organizing USG recommendations on specific areas for USG collaboration with partner governments (GoX) in support of GoX efforts to design and implement a Low Emission Development Strategy (LEDS). The outline will inform the country scoping trip reports and ultimately the draft Intergovernmental Work Agreements outlining USG recommendations for technical support and capacity building activities under the EC-LEDS initiative. Total length of the finished document, excluding appendices, is 60 pages maximum.

Executive Summary

Introduction & Overview

- Introduction to the EC-LEDS Program
- Development and Emissions in the Partner Country

Section 1: GoX Strategic Planning, Policy, and Capacity to Design and Implement a LEDS

- Existing Low Emission Development Environment:
 - Describe existing development goals and objectives
 - Describe existing or planned institutional structure for organizing and implementing development strategies
 - Describe climate change planning and processes to plan climate change policies and programs
 - Identify key donors and activities
 - Identify legal, regulatory, institutional and policy barriers that could impede implementation of selected actions
 - Describe current EC-LEDS-related finance and investment climate
 - Identify areas in which GoX/donors have expressed an interest in collaborating on improvement
- Needs/Gap Analysis:
 - Identify needs or gaps that should be filled in order to design and implement a LEDS
 - Legal, regulatory, financial, ministerial capabilities of the government
 - Donor coordination
 - Private sector engagement (including market analysis capabilities)
 - Access to and use of financial markets
- Intervention Options:
 - For each need identified in the needs/gaps analysis, describe possible interventions and specify:

- Benefit of the intervention to GoX LEDS development
 - Level of effort (USG, GoX, donors) required to achieve improvements
 - Key agencies and organizations that would be engaged
- For each need, make a DRAFT recommendation (can hold for Agency lead approval, if necessary)

Section 2: National Greenhouse Gas (GHG) Inventories and Multi-Sector Environmental and Economic Modeling

- Existing LEDS Environment:
 - Describe the overall approach of GoX to environmental, economic, and resource modeling and assessments and their relative importance for a LEDS
 - Describe the existing economic modeling and planning process and identify the existing economic LEDS components, existing BAU projections (if available), and the stakeholders that are responsible for managing and updating them
 - Describe the existing climate modeling process, including the inventory and adaptation assessments, and identify the existing environmental LEDS components, existing business-as-usual (BAU) projections (if available), and the stakeholders that are responsible for managing and updating them
 - Describe key activities related to economic modeling and planning including stakeholders, NGOs, and donors
 - Identify areas in which GoX/donors have expressed an interest in collaborating on improvement
- Needs/Gaps Analysis:
 - Identify needs or gaps that should be filled in order to plan and implement a LEDS
 - GHG Inventory (sector breakout is likely appropriate)
 - Projections of future GHG emissions and presence of a recognized BAU projection
 - Regional climate change models and/or climate impact and adaptation assessments
 - Macroeconomic modeling (both national and sub-national), including any models that may be recognized as a BAU projection
 - Projections of future economic growth
 - Identification of development pathways
- Intervention Options:
 - For each need identified in the needs/gaps analysis, describe possible interventions and specify:
 - Benefit of the interventions to GoX LEDS development
 - Level of effort (USG, GoX, donors) required to achieve improvements
 - Key agencies and organizations that would be engaged
 - For each need, make a DRAFT recommendation (can hold for Agency lead approval, if necessary)

Section 3: Sector-Specific Observations, Needs and Prioritized Recommendations

- Existing LEDES Environment:
 - Define key sectors (e.g., agriculture, forestry and other land use; energy; transport; industrial processes & waste) by emissions, economic activity, or agent of policy action and relative importance for GoX
 - Describe key activities related to GHG inventory and economic and resource data, including stakeholders, NGOs, and donors
 - Describe any existing frameworks for identifying and evaluating actions
 - Identify areas in which GoX/donors have expressed an interest in collaborating on improvement
- Needs/Gaps Analysis
 - Identify sector-level needs or gaps that should be filled in order to plan, create, and implement a LEDES, such as:
 - Agriculture, Forestry and Other Land Use
 - Energy
 - Transport
 - Industrial Processes and Waste
- Intervention Options:
 - For each need identified in the needs/gaps analysis, describe possible interventions and specify:
 - Benefit of the intervention to GoX LEDES development
 - Level of effort (USG, GoX, donors) required to achieve improvements
 - Key agencies and organizations that would be engaged
 - For each need, make a DRAFT recommendation (can hold for Agency lead approval, if necessary)

Section 4: Implications of EC-LEDES for Mission Programming

- Overview of Mission Programming, Funding Mechanisms, and IRs
 - Describe existing programs in environment and economic development for USAID mission
 - Describe existing funding mechanisms from the Mission and from USAID/Washington for EC-LEDES
 - Describe existing Mission EC-LEDES-related IRs
- Recommend changes to mission programming structure to incorporate EC-LEDES

Section 5: Conclusions

- Specify improvements in LEDES development capacity that could be achieved by GoX and the level of effort that would be required by USG to assist, as well as barriers to success
- Identify three specific sets of recommendations (“high effort”, “medium effort,” and “low effort”) and outline what would be achieved with each

SilvaCarbon

U.S. science, innovation and technical expertise to assist developing countries in monitoring and managing forest and terrestrial carbon

Recent years have seen rapid advancement of science and methodologies to help countries monitor their forest and terrestrial carbon. This includes impressive improvements in satellite data availability and quality, along with improved ground, or *in situ*, measurements, enhanced modeling capabilities, and increased knowledge through research. Ongoing research and international collaboration is particularly critical now for comparing methodologies and identifying good practices and approaches relevant to a variety of country circumstances.

With this in mind, United States federal agencies have joined together to create the SilvaCarbon program to enhance capacity worldwide for monitoring and managing forest and terrestrial carbon. SilvaCarbon will draw on the expertise of the U.S. scientific and technical community including experts from government, academia, non-governmental organizations, and industry. Working in partnership with developing countries and other partners, SilvaCarbon will enhance worldwide capacity by identifying, testing, and disseminating good practices and cost-effective, accurate technologies for monitoring and managing forest and terrestrial carbon.

SilvaCarbon is a flagship program under United States fast start financing for REDD+ and is a U.S. contribution to the Forest Carbon Tracking task of the intergovernmental Group on Earth Observations (GEO). SilvaCarbon will address technical issues including:

- Sampling protocols and design
- Data capture, processing, archiving, and distribution
- Collection and analysis of *in situ* data, including involvement of local communities and stakeholders
- Integration of remotely sensed and *in situ* data
- Classification and mapping of forest cover
- Carbon stock and flow estimation
- Design of monitoring systems for multiple uses
- Land use analysis and planning

Working cooperatively, U.S. federal agencies will draw on their respective strengths to implement SilvaCarbon. Agencies currently involved include: U.S. Agency for International Development (USAID), the U.S. Forest Service within the Department of Agriculture (USFS), the U.S. Geological Survey of the Department of Interior (USGS), the U.S. Environmental Protection Agency (EPA), the U.S. Department of State, the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration within the Department of Commerce (NOAA), and the Smithsonian Institution.

SilvaCarbon will be closely coordinated with international organizations and other governments that are also engaged in the GEO Forest Carbon Tracking task, or in related forest and terrestrial carbon activities.



SilvaCarbon Objectives

Objective 1: Demonstrate and compare forest and terrestrial carbon measurement and monitoring methodologies.

Achieving this objective may include critically reviewing methodologies and technologies for accuracy, uncertainty and cost to provide countries with a range of options for adoption and implementation; supporting an assessment and integration function for methodologies currently being deployed in National Demonstrator sites of the GEO Forest Carbon Tracking task; developing scientific designs for comparing methodologies within a National Demonstrator site; and supporting the implementation of new National Demonstrator sites.

Objective 2: Build capacity of selected developing countries to use forest and terrestrial carbon monitoring and management methodologies and technologies.

Achieving this objective may include developing and delivering good practice guides, manuals, trainings, and tools; facilitating learning exchanges, regional forums, and networks to enhance sharing among countries; providing technical advice and assistance to governments, including National Demonstrators; and partnering with other donors and with International Organizations to multiply impact and reach.

Objective 3: Facilitate, in cooperation with the Committee on Earth Observing Satellites (CEOS) and other partners in the GEO Forest Carbon Tracking task, the coordinated collection and dissemination of earth observation data related to forest and terrestrial carbon monitoring and management.

Achieving this objective may include supporting efforts to enhance interoperability, coordination, and transparency of data collection systems; participating in the design of global sampling schemes of continuous satellite observations aligned with *in situ* data collection; and enhancing access to, and facilitating the processing of, earth observation data for developing countries.

Objective 4: Strengthen the community of forest and terrestrial carbon technical experts

Achieving this objective may include establishing a web presence that includes knowledge management and social networking capabilities; convening meetings and workshops to build collaboration and greater consistency in technical understanding and in the recommendations provided to developing countries; and producing publicly-available technical documents that summarize and critique the latest methodologies and approaches.

For more information, contact the SilvaCarbon Steering Group Co-Chairs:
Douglas Muchoney (USGS): dmuchoney@usgs.gov
Greg Reams (USFS): grems@fs.fed.us
Patrick Smith (USAID): pasmith@usaid.gov

USG Technical Assistance for LEDS Development

ECLEDS is a U.S. Government (USG) initiative to support the development and implementation of Low-Emission Development Strategies (LEDS) in partner countries.

A LEDS is set of strategic economic development and environmental planning frameworks that identify actionable programs to achieve accelerated sustainable economic development with measurable reductions in long-term greenhouse gas (GHG) emissions trajectories.

The USG will support both the development of LEDS in partner countries through technical assistance and training to build in-country capacity and the implementation of high-priority actions through policy design assistance and program grants.

The ECLEDS program is intended to be host-country driven partner countries are expected to assume ownership of the LEDS process by actively engaging in the development and implementation of their strategy.

In which areas could the USG offer assistance?

The USG would deliver both technical and policy assistance to support the design and implementation of a LEDS.

A partial list of the areas in which USG could provide support includes:

- Technical support to assess “business as usual” economic development and environmental activities
 - GHG inventory techniques
 - Policy, regulatory, and institutional analyses (economic and environmental)
 - Economic models
 - Sector-specific analyses and methods for data collection (e.g. electricity generation, transmission, and use; industrial processes and product use; agriculture, forestry, and other land uses; transportation)
- Analytical support to identify, evaluate, and prioritize alternative actions that could be taken to increase economic growth and reduce GHG trajectories as compared to “business as usual”
 - Market potential analyses
 - Marginal abatement cost (MAC) curves
 - Co-benefit assessments of policy/technical innovation (e.g. employment, energy and food security, public health, rural development, air quality, etc.)
 - Cost and cost-effectiveness analyses
- Program design support to facilitate implementation of high-priority actions identified in the LEDS
 - Policy, regulatory, and institutional best practices
 - GHG monitoring and management best practices
 - Broad stakeholder consultation and social impact analyses
 - Institutional strengthening and support to energy, environmental, agricultural, and forestry agencies
 - Identification and facilitation of access to finance and investment alternatives
 - Green business incubators and innovative financing techniques

How could USG build knowledge capacity in partner countries?

USG assistance would emphasize building technical capabilities in partner countries so that each may design, implement, and revise its own LEDS. Examples of how USG could deliver these capacities to local agencies in the partner country could include:

- Developing and providing training on methodological approaches, technical models, analytical tools, data management systems, better use of technological innovation, and best practices via:

- Workshops (country-specific or regional)
- Internet-based courses
- Fora for local agencies and NGOs to promote cross-national academic exchange
- Organized lectures, seminars, and symposia
- Translations of technical documentation into local languages
- Exchange programs and secondments to place local experts at U.S. laboratories, agricultural research centers, and institutions (and U.S. experts at local institutions)
- Remote support, one-on-one mentoring, and collaboration
- Purchasing or providing access to data and tools to fill analytical gaps:
 - Research databases (such as for agriculture, forestry, or energy use self-assessments)
 - Computer and technical hardware
 - Software and analytical tools
- Working with partner country to coordinate investments in future capacity:
 - Research & Development partnerships for local innovation and research centers
 - Support for the hiring of local technical experts to augment existing partner capacity

How could USG technical support be delivered?

- USG assistance would emphasize government-to-government assistance coupled with more traditional contract and assistance work that could include:
 - Grants and cooperative agreements with international and in-country NGOs
 - Interagency agreements with U.S. agencies that possess specific technical expertise (e.g. USAID, State, DOE, EPA, USDA, USFS, and USG laboratories)
 - Contracts and cooperative agreements with international and local institutions and experts
 - Partnerships with other donors and financial institutions to leverage additional initiatives

How would choices regarding the types of support that are given be made?

The particular form and delivery methods of USG assistance will be made in collaboration with the partner country government. The USG will send a team of representatives from U.S. agencies to work with counterparts from the partner country. Together, they will look at existing economic and environmental strategies and capabilities, as well as other donor support activities, in order to identify the needs, strengths, and requests of the partner country and evaluate opportunities for cooperation. A mutual agreement will be drawn up by representatives of the two governments that will specify the exact form and nature of USG assistance.

Primary Mechanisms for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Primary Mechanisms for EC-LEDS								
PASA - EPA	EPA	IAA	9/30/2013	EGAT/GCC	Patrick Smith	Carbon financing (MRV)	Builds greenhouse gas inventory capacity in developing countries. As part of its commitment to the United Nations Framework Convention on Climate Change (UNFCCC), each non-Annex I (developing) country must periodically prepare and submit a National Communication, which includes a comprehensive greenhouse gas inventory component. The cooperative program will help countries meet that commitment by improving national GHG inventory systems, improving the quality of national GHG inventory inputs, increasing the number of developing country GHG inventory experts, and conducting public outreach and dissemination of inventory tools. Central to this work is the refinement of inventory software such as the Agriculture Land Use (ALU) tool, training of developing country government inventory staff, establishment of inventory systems and archived databases, creation and use of "training of trainers" materials to increase the number of inventory experts, and development and use of tools and guidance that help countries utilize GHG inventory data for other purposes, such as low carbon development planning.	
Analysis and Investment for Low Emissions Growth	AILEG	Task Order	8/1/2013	EGAT/EG	David Garber	Sustainable Landscapes, Clean Energy, Adaptation	Facilitate developing country investment in clean energy and sustainable landscapes management by building capacity within host country partners, to understand the economic trade-offs of climate change mitigation policies. The goal of the Task Order is to provide short-term technical assistance, capacity building, academic exchange and training, so that stakeholders will have access to data and analysis from which to base informed decisions for economically beneficial, emissions mitigating policies, projects, and interventions.	TBD
PASA - Department of Energy	DOE	IAA	9/30/2012	EGAT/GCC	Collin Green	Energy	Provides DOE National Labs' technical capabilities, and analytic and technical expertise to advance the use of clean energy technologies in developing countries. Teams are available to address analysis, design, and implementation of clean energy initiatives and projects guided by local needs and priorities. National lab support under this IAA is being significantly directed to support the EC-LEDS initiative.	Missions may buy in, no ceiling issues.

Primary Mechanisms for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/ Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
PAPA - U.S. Forest Service	USFS	IAA	9/30/2012 likely to be extended soon	EGAT/NRM	Rebecca Butterfield	Landscapes, adaptation	Provides technical support to missions, host country governments, and local NGOs to improve the management and conservation of natural forests through technical assistance, training, analysis, and policy reform. Through this IAA, USAID can access the skills of the entire USDA Forest Service (30,000 employees), as well as personnel from other cooperating agencies and partners, to address mission technical needs. Mission buy-in leverage is 1:1. This mechanism will provide coordinated technical assistance on forest carbon measurement and monitoring by working in partnership with missions, developing countries and other partners as part of the SilvaCarbon initiative . SilvaCarbon will enhance capacity by identifying, testing, and disseminating good practices and cost-effective, accurate technology for monitoring and managing forest and terrestrial carbon.	Missions can buy in; ceiling of \$50 million; only about \$20 million has been used so far.

Primary Mechanisms for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/ Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
IFPRI	IFPRI	Grant	TBD	EGAT/GCC	Patrick Smith	Sustainable Landscapes and Adaptation	Provides country-level policy analysis of the drivers of deforestation, forest degradation, and the barriers to increased sequestration specifically to support the EC-LEDS initiative. The proposed modeling draws on significant expertise and existing programs in the CGIAR system (IFPRI, ICRAF, CIFOR and with the CGIAR research program on climate change, agriculture, and food security). This effort will develop analyses that are economy wide, bringing together agriculture, forests, biofuels, and other factors into sophisticated, spatially explicit models.	N/A

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/ Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Mechanisms for Sustainable Landscapes (and Landscapes/Adaptation)								
African Biodiversity Collaborative Group	ABCG	LWA	9/30/2014	AFR/SD	Tim Resch	Landscapes	Provides education, analysis, capacity building, technical support. Could be used for REDD-related carbon financing, potentially other landscape analysis tied to AFR biodiversity. Leader: World Wildlife Fund. Partners include the African Wildlife Foundation, Conservation International, the Jane Goodall Institute, Nature Conservancy, the Wildlife Conservation Society, and the World Resources Institute.	No ceiling for associate awards.
Forest Carbon, Markets, and Communities	FCMC	Task Order	9/30/2014	EGAT/NRM	Erik Streed	Landscapes, LEADS	Provides technical support to missions, host country governments, and local NGOs to improve the management and conservation of natural forests through technical assistance, training, analysis, and policy reform. Includes components in social and environmental soundness, finance and carbon markets, low emissions development strategies, and forest and terrestrial greenhouse gas measurement and monitoring.	missions cannot buy in, but other bureaus from state and USAID can
Prosperity, Livelihoods, and Conserving Ecosystems	PLACE	IQC	Task orders must be awarded by 9/30/2011 but activities for TOs can extend up to 9/29/2014.	EGAT/NRM	Chris Kosnik, Mary Rowan	Landscapes, adaptation	Adds Payment for Environmental Services (PES), forestry, and sustainable landscapes elements; missions doing more than \$30 million projects are encouraged to compete task orders independently. Includes ARD, Chemonics, DAI, ECODIT, IRG.	Ceiling of \$300 million; approx. \$130 million left.
Sustainable Conservation Approaches in Priority Ecosystems	SCAPES	LWA	9/30/2014; associate awards can extend for an additional five years	EGAT/NRM	Hannah Fairbank	Landscapes; adaptation	Site-based conservation program that focuses on current sustainability and conservation needs of globally important biodiversity in landscape/seascapes. Implementation elements include: programs must use a threats-based approach to address conservation issues; programs are implemented from the outset with the aim to achieve financial, social and ecological sustainability and are able to articulate clear and attainable goals to achieve sustainability; individual landscapes/seascapes or policy initiatives should be responsive to changing situations, knowledge and enabling conditions; implementation should emphasize adaptive management and effectively adapt to increasing conservation success at the ground level and within the global conservation community. Implementation may include policy development, policy implementation, capacity building. Includes: African Wildlife Foundation; Pact, Inc; Wildlife Conservation Society; and World Wildlife Fund.	Missions can buy in through associate awards; no ceiling for associate awards.

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/ Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Translinks: Promoting Linking NRM, EG, DG	Translinks	LWA	Leader funding goes through 9/30/2011, but associate buy-ins can go until 2016	EGAT/NRM	Mike Colby, Diane Russell as backup	Landscapes, adaptation	Addreses forest or grassland carbon/REDD projects; other biomass-related carbon activity, including marine/coastal (mangroves, reefs), tree planting, eco-agriculture, etc. Generally no biofuels or energy technology, except possibly cookstoves coupled with community woodlot-type carbon farming to reduce pressure on protected areas. TransLinks' members are already doing REDD and other PES projects (watershed, biodiversity, tourism, NTFPs, eco-agriculture) in many countries. TransLinks partners have given several workshops and training programs (e.g. on carbon measurement, REDD methodology, project development clinics). The member organizations have established partnerships with many of the major players in the carbon-trading field (BioCarbon Fund, GEF, Terra Global, EcoLogic, McKinsey, Moore Foundation, etc.). Associate Awards must be negotiated with the leader. Missions can contact TransLinks management directly (Director David Wilkie, dwilkie@wcs.org, and Asst Director Carter Ingram, cingram@wcs.org) to identify individuals with expertise. Leader: Wildlife Conservation Society.	Missions can buy in through associate awards; no ceiling for associate awards.
PASA - USFS	USFS	IAA	N/A	LAC	Victor Bullen, Ann Dix as alternate	Landscapes, adaptation	Provides technical assistance from the U.S. Forest Service for missions and LAC/Bureau. For implementation, missions normally go through the USFS mechanism managed by Erik Streed.	
Property Rights and Resource Governance	PLACE - PRRG	TO	Scheduled to run until approx. Dec. 2012	EGAT/NRM	Gregory Myers	Landscapes, adaptation	Provides technical assistance to address land tenure and property rights challenges in economic growth, agriculture, gender (HIV/AIDS), natural resource management, governance, conflict, and humanitarian assistance. Policy analysis, advocacy, dialogue, institutional development, needs assessments, project design (including drafting scopes of work), short-term technical assistance. There are about 25 LTPR experts with different areas of specialization available, but they are all heavily booked, so often need to book something six months in advance. Tends to take on smaller programs +/- 1 million per year, and then after the program is up and running, spin it off to a stand-alone activity.	Currently raising ceiling from \$20 million to \$60 million to accommodate field assistance.
Mechanisms for Clean Energy								
Clean Energy IQC		IQC	Base awards of 5 years with three optional years for task orders	EGAT/I&E	Ellen Dragato	Energy	This will 1) address the growing demand for and use of clean energy services in critical priority countries and non-CPCS. 2) Support USAID energy activities that fall under the full range of USAID program areas, and that are consistent with the new U.S. Framework for Foreign Assistance. Provide the technical resources and skills needed to implement important U.S. Government initiatives in the energy sector, including climate change, energy sector governance and reform, energy poverty, and enhanced energy security.	Missions can buy in; \$400m/\$350m

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/ Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Africa Infrastructure Program	AIP	TO	8/31/2013 with possible extension through March 2014	AFR/SD	Jeff Humber	Energy	Provides both short- and longer-term technical and capacity building assistance primarily to governments supporting the planning, due diligence, negotiation and implementation of a range of clean energy (CE) projects in Sub-Saharan Africa (SSA). AIP responds to the fact that private companies are already on the ground in many SSA countries trying to develop and finance non-recourse project finance, CE projects; but they are unable to do so because of policy, regulatory, legal, and lack of government capacity barriers. AIP is a flexible mechanism that can undertake a broad range of activities designed to remove barriers to CE private investment. It currently supports over 10 CE initiatives in SSA, in wind, solar, micro-hydro, geothermal, energy efficiency, and gas flaring mitigation. It can provide upstream helping governments establish a receptive enabling environment for CE private investment, or it can work further down stream supporting governments in transaction -- oriented activities related to the commercial and financial structuring of CE projects. It helps governments bridge the gap with investors and project developers.	Available for buy-ins by AFR missions. Has ceiling of \$35 million, of which \$10 million has already been obligated.
Climate Change Technology Investment Index	CCTII	PIO	4/30/2014	EGAT/GCC	Collin Green	Energy	Grant to the World Bank to develop a climate change technology investment index for developing countries. This tool will enable the systematic and objective evaluation and comparison of the de facto enabling environment in developing countries for supporting private sector investment in climate mitigation technologies. Will give public and private sectors insight into available opportunities for investment in these countries. Will also assist donor agencies to target needed reforms to address specific barriers to improve the investment climate.	Missions may buy in, no ceiling issues.
Private Financing Advisory Network	PFAN	GDA	9/30/2012, will likely be extended	EGAT/GCC	Collin Green	Energy	Multilateral public-private partnership under the Climate Technology Initiative of the UN FCCC. Designed to bridge the gap between investors and clean energy entrepreneurs and project developers. Brings together private sector companies with experience in financing CC technologies and projects to provide guidance on feasibility, project structure, investment and financing, business plan preparation, and introductions to investors. PFAN pre-screens business plans to select the most economically and environmentally viable projects, generally targeting projects that require investment in the range of \$1-50 million.	Missions may buy in, no ceiling issues.
Energy Regulatory Partnership Program	NARUC	CA	9/30/2012, may get extended	EGAT/I&E	Simone Lawaetz	Energy	Focused on establishing international partnerships between U.S. regulatory agencies (through the National Association of Regulatory Utility Commissioners) and developing country regulatory agencies. Works on a wide range of regulatory issues, including tariff setting, licensing, organizational issues within the regulatory itself and staffing, building regional associations, etc. Teams up developing country regulatory body with a U.S. counterpart for a two-year exchange, including 3-4 staff trips, maintenance of relationships online and by phone, with regulatory people here providing advice and assistance. U.S. regulator partners volunteer their time. Recently put together a guidance document for regulatory agencies working on energy efficiency and renewable energy.	Missions can buy in; ample ceiling left.

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Energy Technical Assistance	Energy II	IQC	03/30/2011; In process of requesting an extension through 9/30/2011 for new awards that can then run through 9/29/2014.	EGAT/I&E	Ellen Dragoto	Energy	Provides services in energy sector policy and planning, regulatory and utility management and reform, energy efficiency, renewable energy, and energy and environmental infrastructure and technology transfer, among others. Technical assistance activities primarily: 1) establish the enabling environment and institutional capacity for effective governance of the energy sector, for regional energy cooperation and exchange, and for sectors in which energy is a determining factor; 2) improve the technical efficiency and operational performance of utilities, energy service companies, businesses, NGOs, etc., that operate under the existing and new enabling environment; and 3) assist consumers of energy in addressing the various social, economic and political dimensions of energy service provision, including off-grid energy service provision, and in participating in the decision-making regarding such provision. Includes: Advance Engineering Associates International (AEA); Core International; IRG; Nexant; PA Consulting.	Requested ceiling increase to \$25M
Energy Utility Partnership Program	EUPP	CA	9/30/2013	EGAT/I&E	Sharon Hsu	Energy	Establishes multi-year partnerships and support exchanges between US and developing country utilities for executive exchanges, internships, and training sessions for developing country utilities, ministries, and regulators to learn from U.S. energy executives and their companies. Areas of interest may include regulatory issues (such as cost-based rate establishment), utility operational and management issues (i.e., generation maintenance or metering, billing & collections), improving service quality and the expansion of access to modern energy services, etc. The primary partnership activity consists of executive exchanges between counterpart and U.S. utility executives lasting from 10 to 14 days in duration located in both the developing country and the U.S. On climate change, it can primarily work with utilities on grid-connected renewable energy and energy efficiency/demand-side management. USEA also has members who are experts on carbon capture and storage. USEA can also send staff to countries to conduct a definitional mission (usually 1-2 weeks, meet with stakeholders and develop a program concept for a partnership).	Available for buy-in.
Increasing Adoption of Renewable Energy	RE LWA	LWA	March 2015 (est)	EGAT/I&E	Jeff Haeni	Energy	Seeks to assist developing countries with promoting and establishing an expanded supply of renewable energy systems. The following activities may be undertaken: assessments and program design; baseline analyses and studies, pilot programs, evaluations, training and capacity building, GHG accounting, Low Emission Development Strategies (LEDS), producing and disseminating best practices and lessons learned, policy and regulatory support. Activity areas include but are not limited to: renewable energy small and medium enterprises (RE SME) business development; local governance; cross-sectoral support; household energy; bioenergy; and financing.	Leader award ceiling of \$2.5 m and associate award ceiling of \$5m
VOCational Training and Education for Clean energy	VocTec	LWA	April 2015 (est)	EGAT/I&E	Pam Baldinger	Energy	Purpose is to bolster the capacity of local stakeholders to sustain renewable energy investments, primarily in decentralized clean energy technologies and hybrid renewable energy-hydrocarbon systems. This is principally a field support mechanism concentrating on creating sustainable vocational training capacity to support clean energy programs.	

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Increasing Energy Efficiency	EE LWA	LWA	March 2015 (est)	EGAT/I&E	Sharon Hsu	Energy	Focus on increasing energy efficiency to reduce GHG emissions in developing country economies. Activities include: assessments and program design; baseline analyses and studies; pilot programs; evaluations; training and capacity building; policy and regulatory support; GHG accounting; Low Emission Development Strategies (LEDS). Activity areas include but are not limited to: energy efficiency services in the public/commercial sectors; energy efficiency in water systems; industrial efficiency; transportation.	Leader award ceiling of \$2.5m and associate award ceiling of \$5m
Other Climate Change Mitigation Related Mechanisms								
Environmental Management Capacity-Building Program	ENCAP	TO	9/30/2011	AFR/SD	Brian Hirsch	Landscapes; adaptation	Provides short-term technical assistance, training and analytical support to strengthen AFR's ability to implement the Agency's environmental regulations, and to help strategically plan and improve the implementation of the Bureau's natural resource management, biodiversity conservation, global climate change, and other Environment Sector activities. Activity categories include workshops and other training events, guidance development and dissemination, environmental assessment technical support to AFR Environment Officers, and capacity development in environmental assessment and regulation for African professionals and institutions.	Task order close to finishing; follow-on activity will allow for mission buy-in.
Higher Education for Development	HED	LWA	9/29/2015	EGAT/ED	Gary Bittner	All	Allows USAID operating units across all sectors to access the research, knowledge, technology, resources, and technical assistance of U.S. higher education associations for international development cooperation. Can help identify climate change experts among U.S. universities, establish higher education partnerships, build higher education research capacity, apply technology, teaching, etc. Leader: American Council on Education (ACE).	No ceiling for mission buy-ins.
SEGIR Global Business, Trade, and Investment II	GBTI	IQC	August 2013 for large firms; June 2013 for small firms	EGAT/EG	Teresa Stoll, Mark Kams	Carbon financing, enabling environment for private sector activities	Provides expertise for design and implementation of business development, trade and investment programs including legal and institutional reform; financial sector reform and expansion; privatization and private sector development, including commercial codes, IP, contracts enforcement, dispute resolution; economic policy and institutions; and micro, small, and medium enterprise development; transparency. Knowledge management is an important task. Services provided: technical assistance (long and short term), needs assessment, project design (including scopes of work), monitoring, evaluation (including indicator design, data collection, environmental monitoring and compliance). Includes: Abt Associates, Inc.; Booz Allen Hamilton; Carana Corp.; Chemonics; DAI/Nathan; Deloitte; Segura/IP3; Sibley International; The Mitchell Group.	Ceiling of \$3 billion; approx. \$2.5 billion left.

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Governing Ecosystems (corporate greenhouse gas accounting and reporting standard)	WRI	CA	9/30/2012	EGAT/GCC	Collin Green	Landscapes, energy	Broadens the application of the Corporate Greenhouse Gas Accounting and Reporting Standard, a tool that assists corporations quantify and account for their emissions, important in managing changes in mobile greenhouse gas and conventional air pollutant emissions resulting from multi-modal shifts in public transport. Tool development can, and has, led to the creation of alliances between corporations, governments, and NGOs. Services provided include: monitoring, evaluation (including indicator design, data collection, environmental monitoring and compliance), in-country training (including training of trainers), partnerships/networking (U.S./regional/third country); www.ghgprotocol.org .	

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Mechanisms for Adaptation with EC-LEDS Relevance								
AFR adaptation task order		TO		AFR/SD	Tegan Blaine	Adaptation	Provide mission support, including country-wide vulnerability assessments and vulnerability assessments within specific sectors, improved understanding of model predictions/outputs for decision-making, and analysis related to improved governance around adaptation. Follow-on task order will continue this work.	Funding for mission support is available directly through AFR/SD. Buy-ins for mission support will be possible under following contract.
PASA - U.S. Department of Agriculture/Foreign Agriculture Service	MegaPASA	IAA	9/30/2013	AFR/SD	Mike Curtis	Landscapes; adaptation	(Can bring in expertise from the Foreign Agricultural Service as well as land-grant universities, including many with climate change experience.	Missions do not typically buy in directly but can receive support funded by AFR. No ceiling constraints.
PASA - USGS	USGS	IAA	9/30/2011	DCHA	Laura Arnstrom	Adaptation	Provides technical assistance in natural hazard identification, evaluation, response, and Disaster, Risk, Reduction (DRR) to address geological, hydrological, and biological hazards, including landslides, earthquakes, floods, ecosystem impacts, volcanoes, etc.	Missions can buy in; no ceiling issues, however, buy-in may be limited by IDA funding sources.
Democracy and Governance IQCs and LWAs- Various		LWAs, IQCs		DCHA/DG	Christina del Castillo, David Black	Adaptation, Landscapes, Energy	DCHA/DG manages multiple mechanisms for democracy and governance assistance that may be utilized for programming that (a) integrates DG in to CCI programs, such as assisting national and local governments adopt and implement mitigation and adaptation policies, supporting civil society organizations to advocate for CCI-related reforms, and promoting media coverage of CCI issues, or (b) addresses the impact of CCI as an added stressor on democratic governance, for example by contributing to political instability or straining governments' ability to respond to climate-related disasters.	Missions can buy in or develop associate awards.
PAPA - FEWSNET USGS	FEWS/USGS	IAA	2015	DCHA/FFP	Gary Eilerts	Adaptation	The USGS/FEWSNET team includes the Climate Hazards Group at UC Santa Barbara and the NOAA Climate Services Branch. Its climate change work empirically identifies current climate variability, and projects near-future climate change patterns at sub-national levels, by incorporating local datasets and climatologies, linking them to terrestrial and oceanic drivers, and evaluating the resulting patterns within global climate change modelling. It reveals probable food security and livelihood impacts that may require, or benefit from, adaptation measures.	Mission buy-in available.
PASA - CDC	CDC	IAA	September 2010 (can be extended)	DCHA/OFDA	Laura Powers	Adaptation	Provide technical assistance in public health, nutrition, and water and sanitation for disaster response and risk reduction.	Mission buy-in may not be possible.

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
PASA - NOAA	NOAA	IAA	March 2011 (can be extended)	DCHA/OFDA	Laura Powers; Sezin Tokar	Adaptation	Specialty areas include: coastal hazards; hydrological and meteorological data analysis, modeling and forecasting; and environmental satellite and other data acquisition and monitoring. Partners within NOAA include the National Weather Service, National Marine Fisheries Service, National Environmental Satellite and Data Information Service, National Ocean Service, and the Office of Oceanic and Atmospheric Research.	Missions can buy in; no ceiling issues, however, buy-in may be limited by IDA funding sources.
Farmer to Farmer Volunteer Program		LWA	9/30/2013; associate awards can extend up to 2018	EGAT/AG (BFS?)	Gary Alex; Albert Yeboah	Landscapes, adaptation	Addresses increased agricultural sector productivity and profitability; improved conservation and sustainable use of environmental and natural resources; expanded agricultural sector access to financial services; and strengthened agricultural sector institutions. Provides a broad range of U.S. agricultural expertise, on a voluntary basis, to farmers, agricultural support services, and agribusinesses in host countries. Short term technical assistance, training (including training of trainers), partnerships, networking. Includes: ADCI VOCA; CNFA; Partners of the Americas; Weidemann Associates.	Missions can buy in through associate awards; no ceiling for associate awards.
Rural and Agricultural Systems with a Sustainable Environment	RAISE PLUS	IOC	Feb. 2012 for primary funding, period of performance for task orders can extend up to Feb. 2015	EGAT/AG	Katie Garcia, Lawrence Paulson	Landscapes, adaptation	Provides agricultural sector and rural development related technical assistance services to design, implement and assess/evaluate activities in agribusiness, agricultural crop and livestock productivity, natural resource management and conservation, trade and competitiveness, policy reform, land tenure, rural finance, domestic and external investment, and other areas that lead to increases in jobs, income, and economic growth in rural areas. Includes Abt Associates; ARD; DAI; Fintrack Inc; Weidemann Associates.	Ceiling of \$1.4 billion; approx. \$700 million left.
Sustainable Agriculture and Natural Resources Management CRSP	SANREM	LWA	9/30/2014; associate awards can extend for five years beyond the end date of the LWA (2019)	EGAT/AG (BFS?)	Harry Rea	Landscapes, adaptation in agriculture	Supports sustainable agriculture and natural resource management decision makers in developing countries by providing access to appropriate data, knowledge, tools, and methods of analysis; and by enhancing their capacity to make better decisions to improve livelihoods and the sustainability of natural resources. During the five year extension, the focus will be on increasing food security through the development and dissemination of conservation agriculture technologies for small holder farmers. Has climate change researchers, doing soil analysis, etc. It may not be the best mechanism for experts for specific tasks, although they could generate a list of experts they've drawn from. Leader: Virginia Tech.	Missions can issue associate awards; no ceiling limitation issues with associate awards
Adaptation task order		TO		EGAT/GCC	John Furlow	Adaptation	This has not been awarded. Awardee will support climate change adaptation assessment, piloting, development of guidance and related activities. OAA has indicated that buy-ins will be limited to supporting strategic assessment-type activities, they will not allow implementation of large components of missions' programs.	Buy-in possible for small amounts.

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions be bought in?
IMCAFS: Sustainable Coastal Communities and Ecosystems	SUCCESS	LWA	9/30/2014	EGAT/Water	Richard Volk	Adaptation	SUCCESS promotes the use and management of coastal resources for improved social, economic, and environmental well-being. The goal is to help people improve their quality of life (health, income, education) while protecting biodiversity, and to share lessons across regions to promote replication and enhance the sustainability of similar efforts worldwide. Priority issues include poverty reduction, food security, global climate change adaptation, building human resource capacity and learning. Activities may include: Technical assistance, knowledge management, partnerships, networking (U.S./regional/third country), monitoring and evaluation (including indicator design, data collection, environmental monitoring & compliance), institutional development. Leader: University of Rhode Island.	
IMCAFS: Global Waters for Sustainability	GLOWS	LWA	9/30/14. Associate awards may extend for 5 years after end date of LWA.	EGAT/Water	Sharon Murray	Adaptation	Focuses on all aspects of water resources management and water supply, sanitation, and hygiene (WASH). GLOWS works on-the-ground to implement improved sustainable resource management and service delivery approaches, build capacity through multi-level training activities, and share lessons learned and advancements in water sector practice with local and global partners. GLOWS has considerable experience in programming both the biodiversity and water earmarks, separately and together. The consortium of globally recognized leaders in the sector also works centrally to assist USAID in sharing information and disseminating lessons to USAID Missions and other water sector actors through training and knowledge management activities. Leader: Florida International University.	Missions can be bought in; no ceiling.
Quick Response Technical Assistance Task Orders	WATER II	TO	9/30/2015	EGAT/Water	Dan Deely	Adaptation	Provide short-term technical assistance for any aspects of adaptation related to water and water management, including climate risk adaptation and capacity building, including assessments, analyses and design/evaluation.	Task Order (6) can receive up to \$200,000-250,000 for each TA activity without competition.
Integrated Water and Coastal Resources Management	WATER II	IOC		EGAT/Water	Dan Deely	Adaptation	Provides technical expertise in integrated water and coastal resources management. Includes water supply and sanitation, irrigation systems, hydropower management, urban stormwater management, groundwater management, fisheries, aquaculture and coastal management, industrial pollution prevention and control, water quality management, river management, and river basin management. Partners include ARD, Chemonics, DAI, IRG, Mendez England and Associates, and PA Government Services.	Missions can be bought in; no ceiling issues since still have \$1.6 billion.
PASA - U.S. Army Corps of Engineers and other USG agencies	USACE	IAA	9/30/2014	EGAT/Water	Dan Deely	Adaptation	Provides technical assistance relating to any aspect of the water sector. This PASA can access TA from not only the USACE, but from other USG agencies as well, including USGS, EPA, NOAA, and others. This mechanism is intended to provide field missions with the option of seeking USG-sourced advice, TA, and recommendations when needed, in addition to those available from private sector sources. The USACE is the principal federal water resources development and management agency of the USG.	No ceiling issues for mission buy-in.

Climate Change Mechanisms Relevant for EC-LEDS

Mechanism Name	Short Name	Type of Award	End Date	Bureau/ Office	Contact	Climate Change Focus Area	Purpose	What is left on the ceiling? Can missions buy in?
Communication for Change	C-Change	LWA	9/30/12	GH, EGAT, and DCHA	Gloria Coe (CTO), Elizabeth Fox (DCTO), Roberta Hilbruner (EGAT POC)	Adaptation	Cross-sectoral, cross-bureau communications project focusing on social and behavior change communications. Includes health-related issues, NRM, biodiversity, energy use efficiency, water and sanitation, civil society and government linkages, anti-corruption, poverty alleviation, and a range of other issues. Can build system-wide coalitions and commitment, strengthen district and community planning, work with NGO coalitions, and engage the media to stimulate social action. Leader: AED.	Missions can buy into the leader or develop associate awards; no ceiling concerns.



Climate Change Results Framework

AGENCY DRAFT as of 12-15-10

Low emissions climate-resilient development

- Economy-wide net green house gas emissions reduced from baseline (tons CO₂e)
- Number of countries at "extreme risk" (Climate Change Vulnerability Index) – needs further study
- Change in GHG emissions intensity (tons CO₂e/\$GDP) relative to baseline (% change)

Reduced Vulnerability of People, Places and Livelihoods

- [subset of Climate Change Vulnerability Index? – needs further study]

Adaptation strategies integrated into key sectors, including: agriculture/food security, infrastructure, health, water, disaster preparedness, conflict

- Funding leveraged from public and private sources for climate change adaptation as a result of USG assistance
- Indirect USAID funding implementing effective adaptive strategies

Climate science and analysis inform decision making

- 6 SERVIR hubs established by 2013
- Percent of USAID adaptation countries served by SERVIR

Effective adaptive strategies established

- Number of sector and ecosystem-targeted adaptation strategies piloted
- Number peer-reviewed

Governance to address climate change improved

- Percent of national adaptation plans funded in public sector budgets
- Climate governance index piloted in 4 countries

Vulnerability Assessments Identify High-Risk Populations, Assets, Ecosystems

- 20 missions address chief climate issues in CDCS

Accelerate Transition to Low Emissions Development

- [Where available: Percent change in deforestation rate; percent change in forest cover.]
- Reduced economy-wide GHG emissions growth rate (% change)
- # activities or % activities in LEDS supported by USAID

Foundation Established for Low Carbon Energy Systems

- Number of countries with improved CE business conditions
- Change in share of RE in total primary energy
- Change in GHG emissions per unit primary energy consumption

Land Use Practices Established that will stop, slow deforestation

- Number of hectares under improved management
- National REDD+ Architecture in place in 3 countries by 2013

Finance Mobilized for Low Emissions Development

- Funding leveraged as result of USAID assistance
- Volume of carbon offsets

Low emissions development strategies (LEDS) developed

- 20 LEDS drafted by 2013

GHG Monitoring, Reporting Verification Systems Established

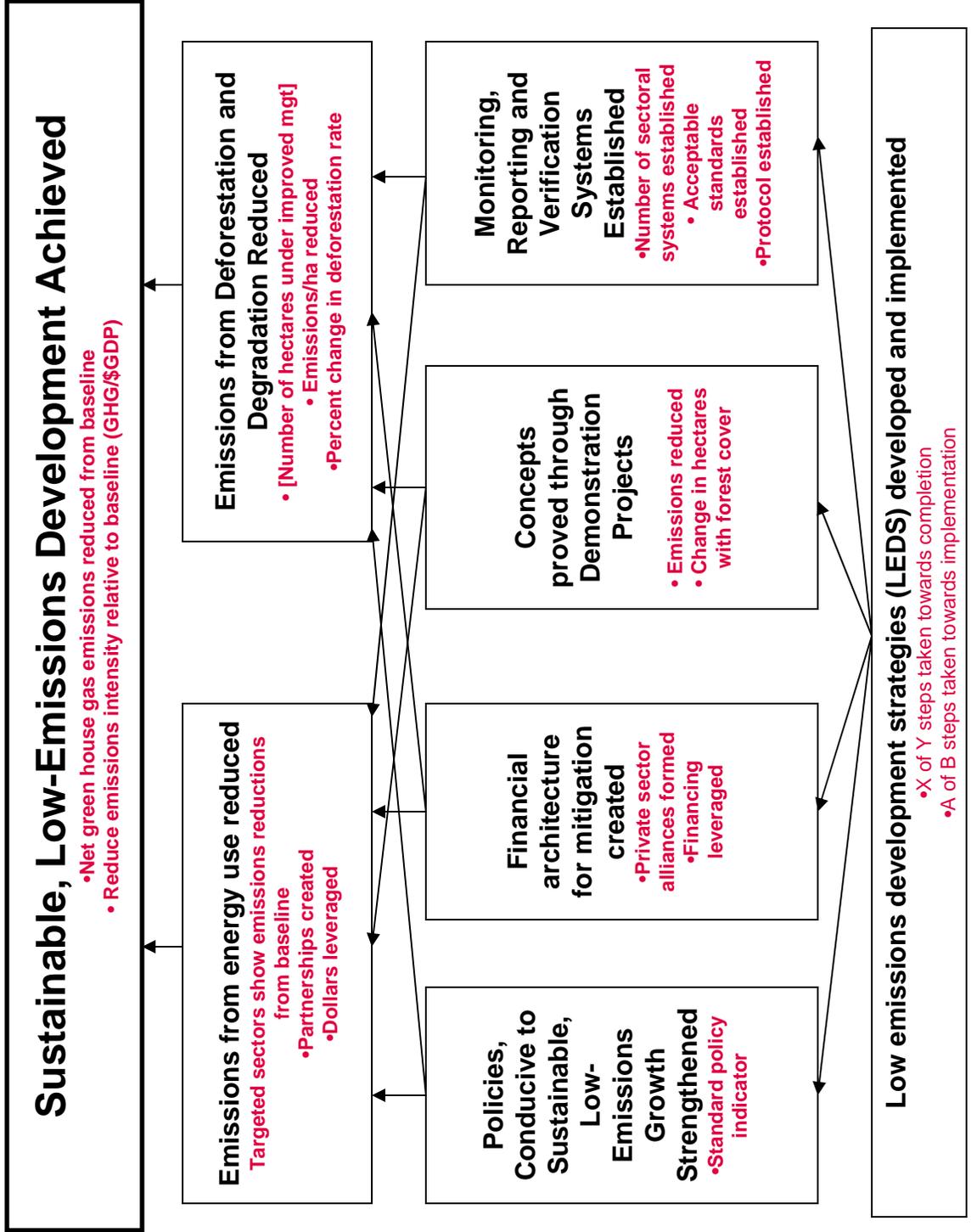
- X of LEDS/REDD+ countries complete GHG emissions inventory by 2013



USAID
FROM THE AMERICAN PEOPLE

USAID/Mexico Climate Change Results Framework

DRAFT as of 6-3-10



Climate Change Indicators in Program Element 4.8.2: Global Climate Change

#	Category	Indicator	Disaggregated	F standard	Also copy into these Elements:	Mandatory?
1	Emissions	Quantity of greenhouse gas emissions, measured in metric tons of CO ₂ equivalent, reduced or sequestered as a result of USG assistance	No	4.8.2-9		Yes* (if programming sustainable landscapes or clean energy)
2	Tools, Methods	Number of climate mitigation and/or adaptation tools, technologies and methodologies developed, tested and/or adopted as a result of USG assistance	REDD+, Clean energy, Adaptation, Crosscutting	4.8.2-8	4.5.2(-31), 5.2.1(-4), 3.1.3(-35), 3.1.5(-27), 3.1.8(-25)	No
3	Law, Policy Agreements, Regulations	Number of laws, policies, agreements, or regulations addressing climate change proposed, adopted, or implemented as a result of USG assistance	REDD+, Clean Energy, LEDS, Adaptation, Crosscutting	4.8.2-4	4.5.1(-19), 4.8.1(-19), 5.2.1(-5)	No
4	Training	Number of people receiving training in global climate change as a result of USG assistance	Gender	4.8.2-6		No
5	Finance	Funding leveraged from public and private sources for climate change as a result of USG assistance	REDD+, Clean Energy, Adaptation, Crosscutting	4.8.2-10 New		No
6	Information	Number of climate vulnerability assessments conducted as a result of USG assistance	No	4.8.2-11 New	4.5.1(-21), 4.8.1(-20), 5.2.1(-6), 3.1.8(-26), 3.3.1(-15),	No
7	Information	Number of stakeholders using climate information in their decision making as a result of USG assistance	No	4.8.2-12 New	4.5.2(-32), 4.8.1(-21), 5.2.1(-7), 3.1.3(-36), 3.1.5(-28), 3.1.8(-27)	No
8	Plans	Number of climate-resilient or low emissions development plans developed as a result of USG assistance	LEDS, Adaptation, Clean energy, Integrated	4.8.2-13 New	4.5.2(-33), 4.8.1(-22), 5.2.1(-8), 3.1.3(-37), 3.1.5(-29), 3.1.8(-28), 3.3.1(-16), 2.2.2(-5)	No
9	Institutions	Number of institutions with improved capacity to address climate change issues as a result of USG assistance	Adaptation, REDD+, Clean energy, Cross-cutting	4.8.2-14 New	4.5.1(-20), 4.8.1(-23), 5.2.1(-9), 3.1.3(-38), 3.1.5(-30), 3.1.8(-29), 2.2.3(-7)	No
10	Institutions	Number of institutions established to address climate change issues as a result of USG assistance	Adaptation, REDD+, Clean energy, Cross-cutting	4.8.2-15 New		No

Climate Change Indicators in Program Element 4.8.2: Global Climate Change

#	Category	Indicator	Disaggregated	F standard	Also copy into these Elements:	Mandatory?
11	Risk reducing practices or actions	Number of stakeholders implementing risk-reducing practices/actions to improve resilience to climate change as a result of USG assistance	None	4.8.2-16 New	4.5.2(-34), 4.8.1(-24), 5.2.1(-10), 3.1.3(-39), 3.1.5(-31), 3.1.8(-30)	No
12	Adaptive capacity	Number of people with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance	Gender	4.8.2-7		Yes* (if programming adaptation)
13	Reduced carbon intensity	Carbon intensity of energy supply	None	4.8.2-17 New		No
14	Reduced carbon intensity	Quantity of operational renewable electric generation capacity as a result of USG assistance	Solar, hydro, wind, other	4.8.2-18 New		No
15	Reduced carbon intensity	Amount of energy displaced with lower carbon fuels as a result of USG assistance	None	4.8.2-19 New		No
16	Reduced end-use energy intensity	Energy saved due to energy efficiency/conservation projects as a result of USG assistance	None	4.8.2-20 New (See 4.4.1-2)		No
17	Reduced end-use energy intensity	Number of households implementing energy efficiency measures as a result of USG assistance	None	4.8.2-21 New		No
18	Reduced end-use energy intensity	Number of people who now have access to modern energy services as a result of renewable energy technologies through USG assistance	Solar, hydro, wind, other	4.8.2-22 New		No
19	Mitigation	Number of clean energy tools, technologies and methodologies developed, tested and/or adopted	No	4.8.2-23 New		No
20	Reduced end-use energy intensity	Anticipated energy savings over years as a result of USG assistance	None	4.8.2-24 New		No
21	Reduced carbon intensity	Anticipated GHG reductions over years, as a result of USG assistance (measured in metric tons of CO ₂ equivalent)	None	4.8.2-25 New		No

EGAT contacts: Bhavani Pathak (bpathak@usaid.gov)

*For mandatory indicators all OUs are required to enter a number. If the OU is not getting that result they may enter "0" and explain why in the narrative. For example, SL activities may not have a field component for which emission reductions can be practically estimated.

Note: Some of the above indicators are repeated in other program elements to capture results from indirect funding and/or reprogrammed resources.



Issuance Date: January 21, 2011

Closing Date: March 17, 2011

Closing Time: 4:00 P.M.,

Bangkok, local time

Subject: Request for Proposals (RFP) No.486-11-007: Low-Emissions Asian Development (LEAD) Program

To All Prospective Offerors:

The United States Government, represented by the U.S. Agency for International Development (USAID), is seeking proposals from qualified organizations interested in providing the services as described in the attached solicitation.

USAID plans to award a five-year Cost plus Fixed Fee (CPFF) completion type, cost reimbursement contract.

You have received this document through the www.fedbizops.gov Internet site. Some of the Attachment/Forms/Appendices/Exhibits in Section J have been supplied to you electronically. Other Attachments/Forms/Appendices/Exhibits, which may not be included electronically in this solicitation, may be found at http://www.USAID.GOV/procurement_bus_opp/procurement/forms/ or by contacting the person in block 10 on page 1 of the SF 33.

As the recipient of this solicitation document, you are responsible for ensuring that you have received it from the Internet in its entirety. USAID bears no responsibility for data errors resulting from transmission or conversion processes. Further, please be aware that amendments to solicitations are occasionally issued and will be posted on the same Internet site from which you downloaded the solicitation. Generally, the Contracting Officer will send copies of amendments to all those who have sent in the written confirmation of solicitation receipt. However, USAID does not guarantee that an amendment will be issued to you directly based upon written confirmation that you have downloaded the solicitation from the Internet. You are therefore advised to regularly check the FedBizOps website (<http://www.fedbizops.gov/>) for amendments.

Please pay careful attention to Section K - Representations, Certifications and Acknowledgements of the accompanying Request for Proposals. Offerors are now expected to comply with FAR clause 52.204-7, Central Contractor Registration, and complete the annual representations and certifications electronically via the Online Representations and Certifications Application website at <http://orca.bpn.gov>.

Offerors must carefully adhere to Section L - Instructions to Offerors and Section M - Evaluation Factors for Award. Sections B through J of the solicitation will become the basis for the contract. Any blanks in Sections B through J will be completed by the Contracting Officer before award.

You are strongly encouraged to submit any comments or questions concerning this RFP by no later than February 10, 2011. These should be directed to Mr. Craig Riegler, Regional Contracting Officer and attention to Ms. Praveena Virasingh, Senior Acquisition Specialist, USAID/RDMA, Bangkok, Thailand by fax, (662)

257-3099, or e-mail. Mr. Riegler and Ms. Virasingh may be reached at the following e-mail addresses, respectively: criegler@usaid.gov and pvirasingh@usaid.gov.

The Proposal shall be prepared in two separate parts: the Technical Proposal shall address technical aspects only while the Business (Cost) Proposal shall present the costs and address related issues such as responsibility. Offerors shall submit one (1) original and five (5) copies of their Technical Proposal in a sealed envelope which is clearly marked as being in response to this RFP. Offerors shall submit one (1) original and one (1) copy of their Business Proposal separately in a sealed envelope indicating that it is in response to this RFP and contains cost information. One copy each of the technical and business proposals shall also be submitted within the sealed envelopes on electronic medium (disk or CD) with text in WORD and budgets in EXCEL. Proposals must be signed by an official who is authorized to bind the organization.

The required closing date and time for receipt of proposals at the USAID/RDMA office in Bangkok, Thailand is 4:00 P.M. Bangkok local time on March 17, 2011. Point of required receipt is at USAID/RDMA, Bangkok, Thailand and not at USAID in Washington, D.C. or at any other location. Offerors should take account of the expected delivery time required by the proposal transmission method they choose, and are responsible to ensure that proposals are received at USAID/RDMA by the due date and time specified above. Faxed proposals are not acceptable. The normal method of transmission for proposals should be by international courier or by mail; proposals submitted via e-mail will also be accepted (see Section L of the RFP).

Oral explanations or instructions given before the award of the contract will not be binding. Issuance of this solicitation does not obligate USAID to award a contract, nor will USAID pay any costs associated with the preparation or submission of proposals. Furthermore, the Government reserves the right to reject any and all offers, if such action is considered to be in the best interest of the Government. Award of a contract under this RFP is subject to availability of funds and other internal USAID approvals.

Thank you for your interest in USAID programs.

Sincerely,

/s/

Thomas M. Stephens
Regional Contracting Officer
USAID/RDMA, Bangkok

To view the entire RFP, visit:

https://www.fbo.gov/index?s=opportunity&mode=form&id=f222802c9de2ae812e8c415bb2cba872&tab=core&_cview=1



Issuance Date: February 14, 2011
Closing Date: March 31, 2011
Closing Time: 4:00 p.m. El Salvador time
Question Receipt Date: March 1, 2011

**Subject: Request For Applications (RFA) No. USAID-RFA-523-11-000001
for the Implementation of the Reduced Emissions from
Deforestation and forest degradation Global Climate Change
Program to support development objectives of
USAID/Missions under the Central America and Mexico (CAM)
Regional Strategy**

Dear Applicants:

The United States Agency for International Development (USAID) Mexico, is seeking application from organizations to implement a Reduced Emissions from Deforestation and forest degradation Global Climate Change Program to support development objectives of USAID/Missions under the Central America and Mexico (CAM) Regional Strategy for a month period, subject to the availability of funds as described in the following Request for Applications. This award is authorized in accordance with the Foreign Assistance Act of 1961, as amended.

The Recipient will be responsible for ensuring achievement of the program objectives. Please refer to the Section I, the Funding Opportunity Description for a complete statement of goals and expected results.

Pursuant to 22 CFR 226.81, it is USAID policy not to award profit under assistance instruments. However, all reasonable, allocable, and allowable expenses, both direct and indirect, which are related to the grant program and are in accordance with applicable cost standards (22 CFR 226, OMB Circular A-122 for non-profit organizations, OMB Circular A-21 for universities, and the Federal Acquisition Regulation (FAR) Part 31 for-profit organizations), may be paid under the agreement when awarded.

Subject to the availability of funds, USAID intends to provide up an amount ranging from \$25,000,000 to \$30,000,000 in total USAID funding to be allocated over the 62 months. USAID reserves the right to fund any or none of the application to be submitted.

This RFA is being issued and consists of this cover letter and the following:

1. Section I, Funding Opportunity Description
2. Section II, Award Information
3. Section III, Eligibility Information
4. Section IV, Application and Submission Information
5. Section V, Application Review Information

6. Section VI, Award and Administration Information
7. Section VII, Agency Contacts
8. Section VIII, Other Information

If you decide to submit an application, it should be received by the closing date and time indicated at the top of this cover letter VIA email attachment to Ms. Ileana Párraga at iparraga@usaid.gov or via www.grants.gov. Modifications to your application (if any) thereof shall be submitted also to the email address provided above in order to expedite the process.

Any questions concerning this RFA must be submitted in writing to Ms. Ileana Párraga at iparraga@usaid.gov

If it is determined that the answer to any question(s) is of sufficient importance to warrant notification to all prospective recipients, a Questions and Answer document, and/or if needed, an amendment to the RFA, will be issued. Therefore, questions should be submitted no later than March 1, 2011.

Applicants are requested to submit both technical and cost portions of their applications in separate volumes. Award will be made to that responsible applicant whose application offers the greatest value to the U.S. Government.

Issuance of this RFA does not constitute an award commitment on the part of the Government, nor does it commit the Government to pay for costs incurred in the preparation and submission of an application. In addition, final award of any resultant grant(s) cannot be made until funds have been fully appropriated, allocated, and committed through internal USAID procedures. While it is anticipated that these procedures will be successfully completed, potential applicant is hereby notified of these requirements and conditions for award. Application is submitted at the risk of the applicant; should circumstances prevent award of a cooperative agreement, all preparation and submission costs are at the applicant's expense.

Sincerely,

David Brown
Director
Regional Office of Acquisition & Assistance
Central America & Mexico

To view the entire RFA, visit:

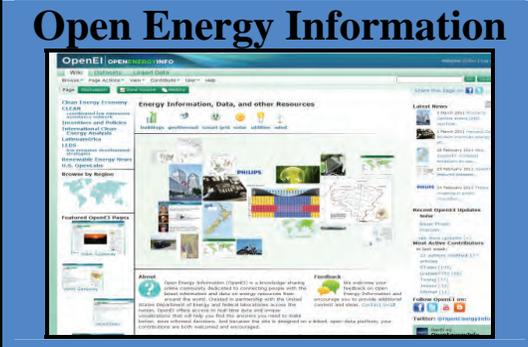
<http://www.grants.gov/search/announce.do?jsessionid=pKrwNDJCy7V0pKhh5g5CPqKggQjPDHkyN9p5hsLyG7kY2f86bZhQ!1145704052>

LEDS Online Resources

United States Government Resources:

 <p>USAID Global Climate Change Website</p>	<p>External Site</p>	<p>http://www.usaid.gov/climate/</p>
	<p>Internal Site</p>	<p>http://inside.usaid.gov/climate/</p>

 <p>USAID Allnet Portal</p>	<p>www.usaidallnet.gov</p> <p>USAID Allnet service provides USAID staff, their partners, and others engaged in international development activities the means to more effectively share critical data and work together. The service is used as a central, easily accessible location for all documents related to the EC-LEDS program.</p>	
	<p>Mother of All Contact Lists (MACL)</p>	<p>portal.usaidallnet.gov/MA</p> <p>CL</p>

 <p>Open Energy Information</p>	<p>www.openei.org</p> <p>Open Energy Information (OpenEI) is a knowledge-sharing online community dedicated to connecting people with the latest information and data on energy resources from around the world. OpenEI is an open platform where information on LEDS can be stored, organized, and easily accessed. Listed below are a few specific examples of how OpenEI is being utilized.</p>	
	<p>OpenEI LEDS Framework</p>	<p>www.openei.org/LEDS</p>
	<p>OpenEI LEDS Toolkits</p>	<p>www.openei.org/wiki/Category:LED</p> <p>S Toolkit</p>
	<p>OpenEI LEDS Inventory</p>	<p>www.openei.org/apps/LEDS</p>

 <p>UNFCCC</p>	<p>www.unfccc.int</p>	
	<p>Cancun Agreements</p>	<p>http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext=/CP.16#beg</p>
	<p>National Communications</p>	<p>http://unfccc.int/national_reports/items/1408.php</p>

Technical Inputs to LEDS: Related programs from various organizations

Technical Inputs	Resources	Related Program/ Organizations	Details
Methods	Comparison of Methods and Tools for Low Carbon Planning	CDKN/CLEAN	Report, available Aug. 2011, will compare existing methodologies for low emission planning and user orientated guidance for developing country decision-makers. http://openei.org/CLEAN
	Energy Technology Roadmaps: A Guide to development and implementation	IEA	Document provides background on roadmaps, stepwise guidance on the development process, and information on how to tailor a roadmap to differing country circumstances. http://openei.org/roadmaps
	GHG Protocol	WRI	GHG accounting method and tools were developed for governments and the private sector and can be used to support GHG inventory development for low emission planning. http://www.ghgprotocol.org/
	Handbook for Conducting Technology Needs Assessments for Climate Change	TNA-UNDP/UNEP-Risoe	Handbook provides guidance on organizing the process, prioritizing adaptation and mitigation sectors and technologies, establishing frameworks to enable transfer of technology and capacity building, and moving from the planning process to implementation. http://ncsp.undp.org/sites/default/files/TNA%20Handbook%20English.pdf
	LEDS Framework and toolkit	EC-LEDS-USG	Based on review of current methodologies for low emission planning, the framework was developed to provide guidance for the planning process as well as information on complementary tools and resources. http://openei.org/LEDS
Tools and Databases	ClimateTechWiki	TNA-UNDP/UNEP-Risoe, REEEP, JI Network, ECN	Website provides information on adaptation and mitigation technologies to support technology transfer and low emission planning. The portal is wiki-based and allows users to add technology case studies and participate in forums related to technologies. http://climatetechwiki.org/
	Climate Analysis Indicators Tool and Open Climate Network	WRI	Databases provide information on country-level GHG emissions. http://cait.wri.org/
	CLEAN inventory of LEDS programs and tools	CLEAN	Inventory compiles information on current low emission planning activities in developing countries. It also provides information on tools that can be used support the planning process. http://openei.org/CLEAN
	ESMAP low carbon planning tools	ESMAP, World Bank	New tools have been developed by ESMAP and the World Bank such as Energy Forecasting Framework and Emissions Consensus Tool (EFFECT), the Transport Activity Measurement Toolkit (TAMP) and a MAC curve tool (MACTool). Many of the tools have easy-to-use interfaces and step-by-step guidance. http://www.esmap.org/esmap/LCGS
Best Practices and Lessons Learned	Project Catalyst LEDS good practice	ClimateWorks Foundation	Drawing from the experiences and lessons of developing and developed countries that have produced LEDS, Project Catalyst has provided initial insight on good practices for planning and

	documents		successful inputs to the process. http://www.project-catalyst.info/
	LEDS-Technical, Institutional and Policy Lessons	OECD	Document provides an overview of LEDS and their potential purpose. It also offers information on strategies that have been developed to date and LEDS related assistance activities, as well as lessons learned from these experiences at technical, institutional and policy levels.
Training Materials	ESMAP E-Learning	ESMAP	E-learning resources will complement new tools that have been developed by ESMAP that will also be made available in coming months. The e-learning materials will focus on providing practical guidance on low emission planning and modeling drawing on lessons from the Low Carbon Growth Country Studies Program. http://www.esmap.org/esmap/LCGS
	CLEAN training resource inventory and webinar series	CLEAN	Inventory is being developed to compile training materials available to support low emission planning. http://openei.org/CLEAN
Information-Sharing Forum	Asian co-benefits partnerships	IGES	Partnership seeks to share information and develop projects to bring together climate and development in Asia. http://www.iges.or.jp/en/cp/pdf/cobenefits/Brochure.pdf
	CLEAN webinar series	CLEAN	Webinars to date include; lessons learned and next steps for low emission planning activities, lessons learned and next steps for roadmap development and linking international climate instruments (TNAs, NAMAs, LEDS and roadmaps). The webinars occur bimonthly and are recorded and posted to the CLEAN website. http://openei.org/CLEAN
	CLEAN meetings	CLEAN	CLEAN holds bimonthly remote meetings and biannual in-person expert meetings to share information on current programs and develop collaborative work plans.
	Climate-compatible growth plans working group	Project Catalyst and ClimateWorks Foundation	Working group provides an informal forum to share experiences with low emission planning based on technical support provided. Also provides an informal forum to discuss the UNFCCC negotiations. http://www.project-catalyst.info/
	International partnerships on mitigation and MRV	Co-chaired by South Africa and Germany	Meetings have been held to share information and discuss how best to approach MRV and implementation in relation to LEDS.
	International Research Network for Low Carbon Societies	Various	Network promotes information exchange and collaborative research to support low carbon planning. http://lcs-rnet.org/
	UNDP portal on low carbon and climate resilient development	UNDP	Portal provides an information-sharing platform for low emission and climate resilient planning at the national and sub-national level; including information on formulating, financing and implementing LEDS. http://www.lowcarbonportal.org/