Overview of the Global Climate Change Initiative

U.S. Climate Finance 2010–2015

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Summary of U.S. Climate Finance for Fiscal Years 2010–2015

Summary of Sources of Climate Funding by Channel: FYs 2010–2015 (Million U.S. $)

Channels	2010	2011	2012	2013	2014	2015	Grand Total
Congressionally appropriated	$1,588	$1,884	$1,262	$1,204	$1,261	$1,496	$8,694
Development finance	$155	$1,115	$722	$1,264	$1,358	$1,028	$5,642
Export credit	$253	$195	$301	$228	$151	$106	$1,234
Grand Total	**$1,996**	**$3,194**	**$2,285**	**$2,696**	**$2,770**	**$2,630**	**$15,570**

Congressionally Appropriated Grant-Based Assistance by Pillar: FYs 2010–2015 (Million U.S. $)

Pillars	2010	2011	2012	2013	2014	2015	Grand Total
Adaptation	$430	$560	$399	$401	$431	$349	$2,570
Clean energy	$915	$962	$586	$577	$639	$928	$4,608
Sustainable landscapes	$242	$361	$277	$226	$190	$219	$1,517
Total	**$1,588**	**$1,884**	**$1,262**	**$1,204**	**$1,261**	**$1,496**	**$8,694**

[1] The climate finance and associated activities reported in this document include grant-based assistance (chiefly through the U.S. Agency for International Development, the U.S. Department of State, the U.S Department of the Treasury, and the Millennium Challenge Corporation); development finance (through the Overseas Private Investment Corporation); and export credits (through the U.S. Export-Import bank). These activities include global, regional, and bilateral programs, as well as contributions to multilateral climate funds and institutions. Global Climate Change Initiative programming is characterized as Adaptation (programming to support climate resilience); Clean Energy (support for renewable energy, energy efficiency, and related activities); or Sustainable Landscapes (activities to reduce or sequester greenhouse gas emissions from forests, agriculture, and other landscapes).

Since the Conference of the Parties (COP) in December 2009 in Copenhagen, the United States has ramped up its climate finance for developing countries fourfold. Between 2010 and 2015, the United States allocated $15.6 billion in climate finance across adaptation, clean energy, and sustainable landscapes activities.[1,2] Additionally, in 2014 the United States pledged **$3 billion** to the Green Climate Fund, the largest pledge by any country. The United States has sought to prioritize vulnerable countries and communities, particularly in Africa, least-developed countries, small island developing states, and glacier-dependent countries.

Over the past six fiscal years (FYs 2010–2015), the United States has worked hand in hand with developing country partners to help them mitigate and adapt to the impacts of climate change. Some results of that cooperation across the three major pillars of U.S. climate assistance follow.

ADAPTATION

- Requiring agencies to incorporate climate resilience into all U.S. development assistance programs, as called for in President Obama's Executive Order 13677 on Climate-Resilient International Development, which U.S. government agencies began implementing on October 1, 2015.

- Providing more than 60 countries with weather, climate, and land-use information for development, as well as capacity building for national and regional hydrometeorological service staff.
- Training more than 2,000 people to use geospatial techniques; fulfilling more than one million requests for online mapping imagery from 37 countries in Africa, Asia, and Central America; and developing systems that are now providing advance warning of floods and other natural threats to tens of millions of people through the SERVIR program.
- Leveraging additional climate finance for adaptation through innovative programs, such as the Adaptation Project Preparation Facility for the Asia-Pacific and climate index insurance.

BOTH CLEAN ENERGY AND SUSTAINABLE LANDSCAPES

- Supporting low-emission development strategies (LEDS) in 26 developing countries to help them reach their development goals in a way that reduces their long-term greenhouse gas (GHG) emissions.
- Supporting 21 countries in the development of their intended nationally determined contributions (INDCs) to the United Nations Framework Convention on Climate Change through direct, bilateral programs and another 45 INDCs through U.S. funding for the Global Environment Facility.
- Building capacity for the development of national GHG inventories in 26 countries.

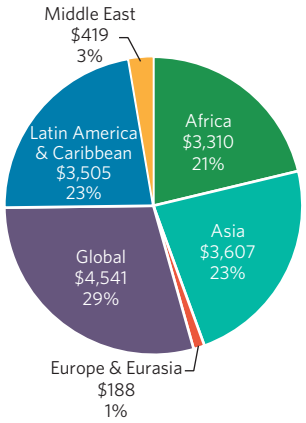
CLEAN ENERGY

- Providing financial support for developing more than 4,000 megawatts (MW) in new renewable energy generating capacity in developing countries, through U.S. development finance and export credit programs, including 750 MW in sub-Saharan Africa and 60 MW in SIDS.
- Supporting an additional 15,000 MW in projected, new renewable energy generating capacity through contributions to the multilateral Clean Technology Fund and Scaling up Renewable Energy in Low income Countries Program.

SUSTAINABLE LANDSCAPES

- Supporting improved forest management and reducing emissions from deforestation and forest degradation (REDD) activities in key tropical forest landscapes, including the **Congo, Amazon and Mekong basins, Indonesia, Mexico and Central America, and West Africa.**
- Leveraging other donor and private resources for large-scale REDD+ (reducing emissions from deforestation and forest degradation in developing countries) activities, such as under the Forest Carbon Partnership Facility's Carbon Fund, which has helped develop 18 large-scale emission reductions programs that, if fully implemented, will protect more than 134 million hectares (ha) of forest and reduce GHG emissions by up to 300 million metric tons of carbon dioxide equivalent (Mt CO_{2e})—the equivalent of taking 64 million cars off the road for a year.

Global and Regional Distribution of U.S. Climate Finance: FYs 2010–2015
(Million U.S. $)



[2] The individual totals in the tables in this report may not add up exactly because of rounding.

Global and Multilateral Initiatives

Climate Finance through Selected Multilateral Funds: FYs 2010–2015 (Million U.S. $)

Selected Multilateral Funds	2010	2011	2012	2013	2014	2015	Total
Clean Technology Fund	$300	$185	$230	$196	$210	$201	**$1,321**
Forest Investment Program	$20	$30	$38	$12	—	$9	**$108**
Pilot Program for Climate Resilience	$55	$10	$19	$87	$75	$45	**$290**
Scaling Up Renewable Energy Program in Low Income Countries	—	$10	$19	$12	$75	$10	**$50**
Global Environment Facility (attributable to climate only)	$44	$45	$60	$62	$72	$82	**$365**
Least Developed Countries Fund	$30	$25	$25	$27	$26	$25	**$158**
Special Climate Change Fund	$20	$10	$10	$10	—	—	**$50**
Biocarbon Fund Initiative for Sustainable Forest Landscapes	—	—	—	$25	$7	$10	**$42**
Forest Carbon Partnership Facility	$10	$8	—	—	—	$5	**$23**
Montreal Protocol Multilateral Fund	$35	$36	$37	$35	$34	$35	**$211**

Note: U.S. contributions to regular, nonclimate-focused programs of the World Bank and multilateral development banks are not included in this table.

SUPPORT THROUGH MULTILATERAL CLIMATE FUNDS

U.S. contributions to multilateral climate-focused funds complement U.S. bilateral assistance by leveraging additional commitments from other donors and the private sector to support projects that are difficult for one donor to fund alone, such as large renewable energy projects. The table above shows contributions to some of the major climate-focused funds. Examples of U.S. support for multilateral climate funds and programs since 2010 follow.

- **$1.3 billion** in U.S. contributions to the **Clean Technology Fund** (CTF), which helps middle-income developing countries scale up renewable energy capacity. It aims to build projects with an installed capacity of more than 15,000 MW, which will reduce GHG emissions by 860 Mt CO_{2e} over their lifetimes. Through the CTF, the United States indirectly supports such projects as **Morocco's** Noor Concentrated Solar Power (CSP) plant. Upon projected completion in 2018, the Noor CSP complex will have more than 500 MW of installed capacity, reduce carbon emissions by 760,000 tons per year, supply power to 1.1 million people, and provide more than 11,000 jobs.

- **$365 million** for the climate programming of the **Global Environment Facility** (out of a total U.S. GEF contribution of $729 million). From 2010 to 2015, the GEF approved $2.1 billion for 472 climate change mitigation projects. Projects approved by the GEF in 2015 alone have the potential of reducing GHG emissions by 256 Mt CO2e over their lifetimes.

- **$290 million** for the **Pilot Program for Country Resilience** (PPCR), which supports the integration of climate resilience into development planning, and is also helping to implement climate-related aspects of those plans. To date, PPCR has approved $863 million in funding for 51 projects in 18 countries in the Pacific, Caribbean, Africa, and South and Central Asia, with a further $1.7 billion in co-financing expected from other sources.
- **$211 million** for the **Montreal Protocol Multilateral Fund** (MLF) from 2010 to 2015, representing approximately 22 percent of contributions to the MLF. The MLF supports projects in 140 developing countries to phase out use of ozone-depleting substances, most of which are also potent GHGs. From 1991 to 2014, the MLF completed 6,429 projects, phasing out nearly 300,000 metric tons of ozone-depleting potential (ODP) consumption and more than 200,000 tons of ODP production.
- **$158 million** for the **Least Developed Countries Fund**, which finances projects to make the most vulnerable countries more resilient to climate change.
- **$108 million** for the **Forest Investment Program**, which provides concessional resources to 23 developing countries, helping to introduce sustainable land and forest management practices that enhance local livelihoods. The program has the largest dedicated REDD+ grant mechanism for indigenous people and local communities.
- **$42 million** for the BioCarbon Fund **Initiative for Sustainable Forest Landscapes**, which promotes reduced emissions from the land-use sector, including REDD+ and sustainable agriculture, as well as smarter land use. An integrated landscape approach to action is supported by grants for enabling environments, results-based payments, and private-sector incentives.

GLOBAL PROGRAMS

Following are examples of U.S.-supported climate programs with a global or multiregional approach.

- The United States co-founded and is one of the largest donors to the **Climate and Clean Air Coalition** (CCAC) on **Short-lived Climate Pollutants** (SLCPs). SLCPs, including black carbon (soot), methane, tropospheric ozone, and hydrofluorocarbons, are extremely potent GHGs that stay in the atmosphere only for a short time (compared with CO_2) and are also major air pollutants. CCAC initiatives work to reduce SLCPs from sources, such as heavy-duty diesel engines, landfills, oil and gas infrastructure, brick production, and household cooking and heating.
- Launched by the United States with several partners at COP 20 in Lima, Peru, the **National Adaptation Plan Global Network** (NAP GN) aims to galvanize bilateral support for developing countries in their process to formulate and implement National Adaptation Plans. NAP GN is also improving coordination among bilateral development partners, facilitating peer learning and exchange, and supporting enhanced leadership on adaptation at the national level. In 2015, NAP GN brought 11 developing countries together to start or enhance their NAP processes. The network will ramp up its efforts and begin to provide more targeted in-country support in 2016.

- **Climate Services for Resilient Development Partnership** (CSRD) is an international partnership that provides actionable science, data, information, tools, and training to help developing countries understand and manage the impacts of climate change. Founding partners include the U.S. government, American Red Cross, Asian Development Bank, Esri, Google, Inter-American Development Bank, Skoll Global Threats Fund, and United Kingdom. CSRD is piloting activities in **Bangladesh, Colombia, and Ethiopia**.

- The public–private **Tropical Forest Alliance 2020** (TFA 2020) works to reduce deforestation caused by conversion of forestland for production of agricultural commodities. It was first organized by the United States and the Consumer Goods Forum, a network of more than 400 major global companies. In support of TFA 2020 goals, the **U.S. Agency for International Development (USAID)** supported the World Resources Institute and Google in developing the Global Forest Watch tool, a free, online forest monitoring and alert system that provides information on tropical deforestation for use by governments, businesses, communities, and activists. USAID has worked with TFA 2020 to bring the government and private sector together in **Indonesia and Colombia** to address commodity-related drivers of deforestation, and in **Paraguay** to launch a new partnership to reduce deforestation associated with soy and beef production.

- The **USAID**-supported **Private Finance Advisory Network** (PFAN) is a network of experts in clean energy business and finance that helps promising clean energy entrepreneurs in developing countries connect with private investors and secure financing. PFAN experts have provided guidance to more than 300 clean energy businesses, of which 68 have secured more than $800 million in financing to add around 600 MW of clean energy generating capacity, potentially reducing GHG emissions by 2.5 Mt CO2e per year.

- This multiagency U.S. government **SilvaCarbon** program fosters the availability and use of space-based observations for national forest monitoring systems in developing countries. SilvaCarbon has supported **Bangladesh, Gabon, Vietnam, Colombia, Ecuador, and Peru** in the development and implementation of forest sector GHG inventories. Also, through SilvaCarbon, complete archives of Landsat 7 and 8 Earth observation satellite data were delivered to 21 countries to complement and validate their respective national forest monitoring systems.

- The **LEDS Global Partnership**, which the U.S. government helped launch in 2011, brings together more than 160 government officials and expert practitioners from around the world to provide a global knowledge-sharing platform on low-emission technical approaches and solutions. In 2016, the partnership will provide new technical assistance resources to support developing countries with INDC implementation.

Africa

U.S. Climate Support during FYs 2010–2015: Key Facts for Africa	
Climate finance (million U.S.)	**$3,310**
Adaptation	$452
Clean energy	$2,638
Sustainable landscapes	$221
Renewable energy generating capacity supported (megawatts)	749
Low-emission development strategy partners (#)	6
Intended nationally determined contributions supported (#)	5
National GHG inventories supported (#)	16

Note: Support shown for renewable energy is based on development finance and export credit commitments.

Two out of three people in sub-Saharan Africa lack basic electricity access. At the same time, Africa faces unique challenges from climate-related impacts, such as drought and desertification. Recognizing the unique challenges and opportunities that climate change presents in the African region, the United States is supporting a range of innovative activities to help African countries achieve their low-emission, climate-resilient development goals. Following are examples of some U.S.-supported climate programs in Africa.

ADAPTATION

- In **Mozambique, USAID's Climate Change Urban Adaptation Program** helped to design and implement a mobile phone-based early warning system that is helping coastal populations cope with threats from climate change-induced sea level rise and extreme weather events. Currently operational in two cities with a combined population of 300,000, the system will be scaled up for use at the national level.

- **USAID's Famine Early Warning Systems Network** (FEWSNET) provides information about expected weather, rainfall patterns, and crop forecasts to governments and regional organizations in the **Horn of Africa and Sahel** regions. These forecasts help farmers determine when to plant, and assist African governments and donors with preparing for and responding to food insecurity and emergency situations.

- In **Senegal, the USAID Economic Growth Project** expanded access to agricultural risk transfer instruments that help farmers manage crop losses caused by variable rainfall patterns. These patterns directly threaten production financing, livelihoods, food security, and the overall sustainability of agricultural development. From 24 farmers covered by index-based insurance in 2012, the program has expanded access to more than 10,000 insured producers in 2014.

- In **Ethiopia, USAID's Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) Project** works in the drylands to help pastoralists build incomes and improve their ability to adapt to the adverse effects of climate change. USAID's support enabled the mapping of 23 rangeland systems in the Somali, Afar, and Oromia pastoral areas, which has placed more than 20,000 ha of communal rangelands under improved natural resource management activities.

CLEAN ENERGY

Working together with the **Power Africa and Enhancing Capacity for Low Emission Development Strategies (EC-LEDS)** initiatives, USAID, Overseas Private Investment Corporation (OPIC), Export-Import Bank of the United States (EXIM), Millennium Challenge Corporation (MCC), and United States Trade and Development Agency (USTDA) are among several U.S. government agencies that have devoted significant resources to supporting long-term strategies, expanding renewable energy resources, and improving energy efficiency in Africa. Following are some examples of this support.

- Ongoing **MCC** compacts with Ghana and Malawi, and new compacts approved in 2015 for Benin and Liberia will help greatly expand access to clean energy. The **Benin** Power Compact will support major improvements in that country's power sector, including 46 MW of new renewable energy generating capacity, support to Benin's electricity regulatory authority, improvements in transmission, and support for off-grid electrification. The **Liberia** compact will support rehabilitation of the 88-MW Mount Coffee hydropower plant, the country's largest power plant. The **Ghana** compact's investments in energy efficiency and demand-side management are expected to decelerate demand by 400 MW per decade by 2030, reducing carbon emissions by 15 million tons. The **Malawi** compact is rehabilitating a hydroelectric plant and much of Malawi's power transmission infrastructure.

- **OPIC** committed **$1.5 billion** during this period to support renewable energy projects that could add approximately 650 MW of power to Africa, including **$400 million** in debt finance for a 100-MW concentrated solar project in the North Cape region of **South Africa** and **$128 million in finance and $46 million in political risk insurance** to the 310-MW Lake Turkana wind farm project in **Kenya**. The Lake Turkana project will be the single largest wind power project in Africa, and is projected to boost Kenya's installed energy capacity by 20 percent.

- **USTDA** has provided critical project planning assistance for 37 Power Africa projects that support the potential development of more than 723 MW of new power generation—enough energy to supply 1.4 million African homes—and could help leverage more than $6.4 billion in financing from public and private sources.

- The **U.S.–Africa Clean Energy Finance Initiative** (ACEF) provides early-stage project preparation support to help more projects reach financial closure. Since its launch in 2012, ACEF has supported 32 renewable energy projects across 10 African countries. If all 32 projects are successful in obtaining financing, these projects could to add more than 300 MW of new generating capacity in Africa and mobilize more than $1.4 billion in project capital.

USAID Technical Assistance Programs

USAID's technical assistance programs in Africa complement the more infrastructure-intensive work of MCC, OPIC, EXIM, and USTDA by building technical capacity for long-range energy and low-emissions planning, supporting improved enabling environments for energy efficiency and renewable energy, and providing transaction advisory services to countries in the region on major energy projects. Following are some examples of this assistance.

- In **West Africa**, a USAID-supported regional transaction advisor is working with host governments and the private sector to advance renewable energy generation projects throughout the region. USAID also provides technical assistance to the West African Power Pool on interconnection projects and regional generation transactions to integrate clean energy sources into power systems, and helps build capacity in national electricity regulatory authorities. USAID helped the Government of **Nigeria** develop a model power purchase agreement for solar and wind power projects, and assisted both **Ghana and Nigeria** in capturing and utilizing previously flared natural gas, thus reducing GHG emissions while increasing marketable energy resources.

- USAID's **East Africa Geothermal Partnership** has provided advice to East African governments on managing their geothermal resources. USAID has also advised the Government of **Kenya** on integrating wind energy into its national grid; assisted the Government of **Ethiopia** on its power purchase agreement for a private-sector geothermal project; and supported a regional framework for trade in clean energy between **Kenya, Ethiopia, and Tanzania**.

- In **southern Africa**, USAID is helping countries with both the enabling environment and the procurement process for renewable energy. It has assisted the governments of **Lesotho, Mozambique, Namibia, Swaziland, and Zambia** in designing regulatory policies for integrating renewable sources into their power grids. USAID also has supported the governments of Mozambique, Lesotho, and Namibia in the procurement process for such projects.

SUSTAINABLE LANDSCAPES

- **USAID's Central Africa Regional Program for the Environment** (CARPE) supports Congo Forest Basin countries to protect one of the world's great carbon sinks. Current CARPE activities help the **Democratic Republic of the Congo** (DRC), **Republic of the Congo** (ROC), **Rwanda, Gabon, Cameroon, and Central African Republic** better monitor the state of their forests through training in the use of satellite imagery and other geographic information systems (GIS). CARPE also supports on-the-ground forest management activities in eight landscapes totaling more than 29 million hectares in the DRC and ROC.

- **USAID** has provided 13 countries in **West Africa** with capacity-building support on the use of GIS tools for forest mapping.

- **Gabon** became the second developing country (and the first in Africa) to submit its INDC, with help from U.S.-funded **forest advisors for EC-LEDS**. The advisors worked with the Government of Gabon to develop a forest-monitoring system and gathered forest-cover data that were used to inform the INDC.

Ethiopia, Gabon, Kenya, Malawi, South Africa, and Zambia are all partnering with the United States on the Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) program.

Asia

U.S. Climate Support during FYs 2010–2015: Key Facts for Asia	
Climate finance (million U.S.)	**$3,607**
Adaptation	$311
Clean energy	$2,990
Sustainable landscapes	$306
Renewable energy generating capacity supported (megawatts)	820
Low-emission development strategy partners (#)	7
Intended nationally determined contributions supported (#)	8
National GHG inventories supported (#)	8

Note: Support shown for renewable energy is based on development finance and export credit commitments.

Asia hosts 60 percent of the world's population, three of the world's ten largest GHG emitters, and some of its fastest-growing economies, as well as critically important tropical forests and many countries that are vulnerable to the impacts of climate change. U.S. climate finance in the region promotes energy efficiency and renewable energy for those growing populations, protects forests that sequester carbon, and helps such vulnerable countries and regions as Bangladesh, the Mekong Basin, glacier-dependent countries, and island nations prepare for the impacts of climate change. Following are examples of some U.S.-supported climate programs in Asia.

ADAPTATION

- **USAID** climate-smart information and planning activities provide critical support for building climate resilience in the **Philippines**. On average, 20 typhoons hit the Philippines each year, and these storms are showing signs of becoming more intense and less predictable. With USAID support, the Philippine Atmospheric, Geophysical and Astronomical Services Administration is providing tailored weather and hazard risk maps to local governments, so they can integrate this information into their planning.

- **USAID's Contribution to High Asia Runoff from Ice and Snow** (CHARIS) project aims to develop an accurate, comprehensive assessment of the snow and glacier contribution to the water resources originating across the high mountain ranges of South and Central Asia. This assessment is crucial in forecasting the future availability and vulnerability of water resources in a changing climate. To support detailed mapping of glaciers and analysis of their dynamics, CHARIS has established research partnerships with universities and government agencies in **Bhutan, Nepal, India, Pakistan, Afghanistan, Tajikistan, Kyrgyz Republic, and Kazakhstan.**

- In **Bangladesh**, the government's flood forecasting and warning center is using a tool developed by **USAID's SERVIR** project to make flood warning available eight days in advance—twice the previous warning—providing millions of Bangladeshis with life-saving information at a time when changing rainfall patterns are making flood cycles more destructive and erratic. USAID also built village-level climate resilience in 2015 through vulnerability assessments and the adoption of climate-resilient practices in 1,000 villages and 48 co-management organizations. USAID-supported communities developed 296 climate-resilience action plans that would improve their climate resilience by revising or relocating agricultural practices, planting trees for erosion protection and restoration, and propagating salt-tolerant rice varieties.

- **USAID's Mekong Building Climate Resilience in Asian Cities** (M-BRACE) project helped municipal governments in the subregion's two most urbanized countries (**Thailand and Vietnam**) respond to rapid urbanization and climate change. In 2014, M-BRACE conducted climate vulnerability assessments for Lao Cai and Hue in Vietnam as well as Phuket and Udon Thani in Thailand, resulting in the adoption of climate change strategies and action plans.

- With **USAID** funding support, the **National Oceanic and Atmospheric Administration** (NOAA) developed a suite of climate and ocean change prediction products that assists coastal resource and fisheries managers in the Coral Triangle countries (**Indonesia, Malaysia, the Philippines, Papua New Guinea, Timor Leste, and Solomon Islands**) with performing climate change vulnerability assessments and adaptation strategies for coastal and pelagic fisheries.

Bangladesh, Cambodia, Indonesia, Kazakhstan, Philippines, Thailand, and Vietnam are all partnering with the United States on the EC-LEDS program.

CLEAN ENERGY

- **EXIM** has committed **$84.9 million** in export finance for wind turbines with a generating capacity of more than 82 MW for the Bac Lieu wind farm in **Vietnam**. USTDA is supporting the third phase of Bac Lieu's development, which will help generate more than 140 MW of additional wind energy. Vietnam has among the highest wind power potentials in the region, and the government aims to produce 1,000 MW of wind energy by 2020.

- **OPIC** has committed more than **$400 million** in finance for wind and biomass power projects in Pakistan that, when completed, would add 250 MW of generating capacity to that energy-strapped country. Pakistan's peak power demand is expected to exceed current installed capacity by nearly 10,000 MW in the next few years.

- The five-year, **$600 million MCC** compact with **Indonesia** is a key pillar of the U.S.–Indonesia Comprehensive Partnership. Its $330-million **Green Prosperity (GP) Project** seeks to address critical constraints to economic growth, while improving land-use practices and stewardship of natural resources and increasing renewable energy technologies. As part of the GP Project, MCC has committed more than $145 million to date in funding for renewable energy projects that will leverage up to $400 million in private financing.

- In the **Philippines**, the **EC-LEDS** program is working with the government to improve the quality and accuracy of its national GHG inventory. The Philippines is using the GHG inventory data to form achievable mitigation plans in key economic sectors, including energy, transport, and land use. EC-LEDS is also strengthening in-country capacity on forest

remote sensing to implement the Philippine National REDD+ Strategy, critical to advancing effective management of the country's forest resources for carbon sequestration, climate resiliency, and economic growth.

U.S.–India Partnership to Advance Clean Energy (PACE)

PACE includes contributions from seven U.S. government agencies. Since its launch in November 2009, PACE has catalyzed close to **$2.5 billion** in public and private resources for clean energy projects in India.

- **OPIC** and **EXIM** have committed more than $700 million in finance for solar energy projects to support India's national solar target of 100 gigawatts of capacity by 2022.
- The **U.S. Department of Energy** and the **National Renewable Energy Laboratory** have undertaken joint research with Indian counterparts on solar energy.
- **USTDA** has supported projects to deploy smart-grid solutions in four of India's seven largest cities, including New Delhi, where USTDA assistance helped to decrease energy losses from 53 percent to 11 percent in Tata Power Delhi Distribution Limited's six million customer network.
- **USAID** has provided technical support on a range of issues, such as training for bankers on financing energy efficiency projects; capacity building and regulatory support for utilities; energy efficiency for buildings; training for the solar industry workforce; energy storage technologies; solar resource assessments; off-grid applications, such as solar irrigation pumps; and super-efficient appliances.
- The United States and India also have established a new **Clean Energy Finance Forum** to promote investment and trade in clean energy projects, and a government-to-government Clean Energy Finance Task Force to help overcome strategic barriers to accelerating institutional and private financing.

SUSTAINABLE LANDSCAPES

- In **Indonesia, USAID** helped develop the first comprehensive maps of forest cover, including peat forest and swamps (deforestation and peat drainage are leading contributors to GHG emissions in Indonesia), and developed REDD+ projects that are expected to sequester at least 5 Mt CO2e per year over the next several years. USAID also works with the private sector and Government of Indonesia to reduce the degradation of forests and peatlands for oil palm cultivation.
- **USAID's Vietnam Forests and Deltas Program** partnered with the Government of Vietnam to implement the first nationally mandated Payment for Environmental Services (PFES) system in Asia. Payments to participants under the PFES system are $55–$60 million annually for their work in protecting forests and watersheds. The three initial provincial forest funds have expanded to 37 funds servicing 100,000 forest owners and users protecting nearly 3.3 million hectares of forest—27 percent of Vietnam's total forested area.

- **USAID's Lowering Emissions in Asia's Forests** activity, in collaboration with the U.S. Forest Service, links U.S. and Mekong university professors on climate change science, lesson planning, and teaching techniques. More than 100 professors from 14 universities in **Cambodia, Laos, Thailand, and Vietnam** have participated in this successful effort to develop coursework and supporting materials for four climate change modules: basic climate change, low-emission land-use planning, carbon measurement and monitoring, and social and environmental soundness.
- In **India, USAID's Partnership for Land-Use Science** is strengthening capacity for REDD+ implementation by developing a suite of ecosystem management tools to protect, maintain, and restore forests in four areas. The partnership activity developed protocols for remote sensing to estimate forest carbon and a Forest Data Management System, allowing India to meet its monitoring, reporting, and verification requirements under REDD+.

Latin America and the Caribbean

U.S. Climate Support during FYs 2010–2015: Key Facts for Latin America and the Caribbean	
Climate finance (million U.S.)	**$3,505**
Adaptation	$209
Clean energy	$2,990
Sustainable landscapes	$307
Renewable energy generating capacity supported (megawatts)	2, 469
Low-emission development strategy partners (#)	6
Intended nationally determined contributions supported (#)	7
National GHG inventories supported (#)	5

Note: Support shown for renewable energy is based on development finance and export credit commitments.

Latin America and the Caribbean are home to countries that are significant GHG emitters; ecosystems—glaciers and coastal regions—that are at significant risk from climate change impacts; and tropical forests—including the Amazon Basin—that play a critical role in sequestering carbon. U.S. programs across the region support clean energy and low-emissions development, improved forest management, and climate resilience. Following are examples of some U.S.-supported climate programs in Latin America and the Caribbean.

ADAPTATION

- **Colombia** is very vulnerable to the impacts of climate change, with projections showing increased potential extremes for both flooding and drought. To help reduce the damaging effects of extreme weather events, **USAID** has helped Colombia develop a water management tool for the Magdalena River Basin—home to 70 percent of Colombia's population and most of its economic output—that takes into account those projected impacts.

- **USAID's High Mountain Adaptation Partnership** (HiMAP) is assisting **Peru** and other countries in high mountain regions with dealing with the impacts of climate-related glacial melt. Populations in these countries are heavily dependent on these glaciers as a water source. Peru's total glacial area has decreased by 22 percent over the last 35 years. HiMAP helped the city of Huaraz and nearby mountain communities in the city's watershed develop a Local Adaptation Plan of Action that will reduce the risk of flooding from the bursting of glacial lakes and other climate-based threats. HiMAP also supports knowledge sharing between Peru and other countries with similar problems, such as Nepal and Tajikistan.

CLEAN ENERGY

- In **Colombia, USAID's EC-LEDS** program is supporting the development of Sectoral Mitigation Action Plans for the transport, mining, energy, hydrocarbon, housing, and solid and water waste sectors. This work, combined with support for a comprehensive national GHG emissions baseline, informed Colombia's INDC, which pledges to cut 2030 emissions by 20 percent—67 million tons per year—from the business-as-usual scenario.

- **USAID** is supporting **Mexico's** efforts to meet national GHG reduction goals by helping it establish technically achievable targets of 24.9 percent clean energy by 2018, 40 percent by 2035, and 50 percent by 2050. It also helped Mexico update and improve its GHG inventory. USAID's EC-LEDS resources continue to help Mexico address grid-integration challenges, promote investment in clean energy development, and design renewable energy priority zones. Since 2010, **EXIM and OPIC** have supported the government's renewable energy roadmap through financial commitments approaching **$450 million** for clean energy projects that could provide up to 275 MW in new generating capacity for Mexico. **USTDA's Smart Grid Regulatory Framework Technical Assistance** project supported smart grid deployment in Mexico.

- Announced by President Obama in April 2015, the **Clean Energy Finance Facility for the Caribbean and Central America** aims to catalyze much-needed public- and private-sector investment in clean energy projects in the two regions by providing grant support for early-stage project development. The facility will help promising but undercapitalized projects address key planning and feasibility issues that are critical to successful financing and implementation. In addition to grant support, facility participation can open doors to private financing and additional **OPIC and USTDA** support, including OPIC loans and guarantees, political risk insurance, and investment fund support.

- **EXIM and OPIC** made financial commitments of more than **$330 million** to projects that, when completed, will add approximately 275 MW of clean energy to Central America's generating capacity, including EXIM's **$158 million** loan to MesoAmerica for a 102-MW wind farm in **Honduras**, the largest wind power project in Central America. USTDA supported a feasibility study for the development of a 20-MW hydropower facility on Lake Ilopango in **El Salvador**.

- **USAID's EC-LEDS** program helped **Peru** pass the "INFOCARBONO" law, which establishes a national GHG inventory system, and provided technical assistance and capacity building to improve Peru's GHG inventory in several sectors. The United States also helped the Government of Peru develop a transport sector Nationally Appropriate Mitigation Action that will reduce GHG emissions by a cumulative 5 Mt CO_2e between 2015 and 2025. **EXIM and OPIC** have made financial commitments of more than **$600 million** for projects that, if completed, would add almost 350 MW of renewable energy generating capacity in Peru.

- **OPIC** has made close to **$900 million** in financial commitments for wind, solar, and hydroelectric projects in **Chile**, that would add more than 960 MW to that country's generating capacity.

Colombia, Costa Rica, Guatemala, Jamaica, Mexico, and Peru are all partnering with the United States on the EC-LEDS program.

SUSTAINABLE LANDSCAPES

- **USAID** support for **Peru's National Forest Inventory** and a new system for tracking timber from production forest to export ports will help protect forest resources, reduce illegal logging, and sequester GHGs. Peru's low-emission development approach identifies 2,000 Mt CO_2e in potential emission reductions over 35 years from improved forest management activities. USAID is assisting Peru's new Forest and Wildlife Service (SERFOR) in improving those forest management techniques and processes. USAID is also supporting the development of Peru's National Forest and Wildlife Information System, which will feature automated, real-time information to track the chain of custody for timber, detect offenses, and thus reduce illegal logging and illegal timber trade in Peru.
- In **Colombia, USAID** is supporting **REDD+ projects** that are expected to achieve 3 Mt CO2e in GHG reductions annually over the next 10 years.

Special Focus: Small Island Developing States

U.S. Climate Support during FYs 2010–2015: Key Facts for Small Island Developing States	
Climate finance (million U.S.)	**$413**
Adaptation	$203
Clean energy	$203
Sustainable landscapes	$7
Renewable energy generating capacity supported (megawatts)	60
Low-emission development strategy partners (#)	1
Intended nationally determined contributions supported (#)	5
National GHG inventories supported (#)	3

Notes:

Support shown for renewable energy is based on development finance and export credit commitments.

The totals shown for SIDS also contribute to the totals shown for the respective regions in which those SIDS are located.

Small island developing states (SIDS) are among the countries vulnerable to climate change and also typically have extremely high energy costs. U.S. support to SIDS is focused in the Pacific and the Caribbean.

PACIFIC SMALL ISLAND DEVELOPING STATES (PSIDS)

In response to the urgent needs of PSIDS, a new U.S. climate change assistance program in the Pacific has allocated more than **$60 million** since 2010 for improved climate forecasting, protection of mangroves and coral reefs, climate-resilient agriculture and water supplies, and related programming. Following are some examples of this support.

- Through the **Coastal Community Adaptation Project, USAID** is assisting PSIDS by increasing the climate resilience of small-scale community infrastructure, building local capacity for disaster prevention and preparedness, and increasing national capacity for climate change governance across nine PSIDS **(Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu)**.

- The now-completed **Mangrove Rehabilitation for Sustainably Managed, Healthy Forests** (MARSH) project promoted mangrove restoration in **Papua New Guinea, Solomon Islands, and Vanuatu**. MARSH established mangrove nurseries, built capacity in mangrove reforestation and community-based climate change adaptation, and assisted local-level governments to formulate provincial mangrove policies and management plans.

- Implemented by **NOAA, Enhancing Capacity for Adaptation to Climate Change and Variability in the Pacific Small Island Developing States** helped build the capacity of

PSIDS local and regional meteorological services to provide early warning of climate-related conditions that may impact coral reefs, fisheries, and coastal communities.

- The **Adaptation Project Preparation Facility for the Asia-Pacific** has helped build the capacity of PSIDS governments to access and manage adaptation finance, including support from the Green Climate Fund. Already the project has helped PSIDS (including **Vanuatu, Solomon Islands, and Samoa**) access more than **$67 million** from multilateral adaptation funds for such activities as coastal resource management, water supply, and disaster risk reduction, benefitting more than 100,000 individuals.

CARIBBEAN

As with PSIDS, the United States has stepped up its climate finance for the Caribbean region. Through its missions in the Caribbean, **USAID** climate change program support totaled more than **$85 million** during 2010–2015, while **OPIC and EXIM** combined have committed close to **$200 million**. Following are some examples of this support.

- With **USAID's** assistance, the **Barbados**-based **Caribbean Institute for Meteorology and Hydrology** established the Caribbean Center for Climate and Environmental Simulations. The center simulates regional environmental and climate processes to determine what areas are at greatest risk from climate change, improves early warning processes, and proposes policies to mitigate risks.

- In **Jamaica**, **OPIC** committed **$43 million** in finance and **$34 million** in political risk insurance to the development, construction, commissioning, and operation of a 34-MW wind farm in St. Elizabeth Parish. OPIC also committed **$47.5 million** in finance for a 20-MW solar photovoltaic generating facility in Content village—the first utility-scale photovoltaic power plant in Jamaica.

- The United States provided support for **Grenada's** INDC, including data collection and analysis and policy assessment to help Grenada's government incorporate GHG mitigation opportunities for the energy, waste, and transport sectors.

- Based on the findings of climate risk assessments provided by **USAID's Climate-Resilient Infrastructure Services** program, which showed increased flooding risk, the **Dominican Republic** changed the location of a major waste water treatment facility in its capital city of Santo Domingo to another site less prone to flooding. USAID also is implementing, in partnership with Swiss Re Insurance Company, a climate resilience index insurance program to provide insurance to small farmers affected by drought or other extreme weather events.

OTHER REGIONS

- **MCC's** Compact with **Cape Verde** provided **$41 million** for a water, sanitation, and hygiene project that strengthens national-level institutions, reforms utilities, and improves physical infrastructure. These activities will help this already water-scarce nation adapt to the expected negative impacts of climate change on water availability.

- **USAID** is helping **Maldives** adapt to climate change impacts by supporting improvements in water and sanitation systems on the island of Hilnnavau and coral reef conservation efforts in this island nation spread across a series of coral atolls.

Summary of U.S. Climate Finance by Region and Country: FYs 2010–2015 (Million U.S. $)

Recipient Country/Region	Adaptation	Clean Energy	Sustainable Landscapes	Total
Global and Multiregional (including multilateral)	**1,482.5**	**2,311.2**	**747.4**	**4,541.1**
Multiple regions—multiple countries	1,482.5	2,311.2	747.4	4,541.1
Africa	**452.0**	**2,637.8**	**220.6**	**3,310.4**
Africa—multiple countries	91.9	91.7	129.0	312.5
Angola	0.4	0.0	0.0	0.4
Benin	0.0	204.7	0.0	204.7
Burkina Faso	0.0	1.8	0.0	1.8
Burundi	0.0	0.6	0.0	0.6
Cabo Verde	41.0	0.0	0.0	41.0
Democratic Republic of the Congo	0.3	2.3	10.1	12.6
Ethiopia	135.6	4.0	7.0	146.6
Gabon	0.0	0.0	0.2	0.2
Ghana	2.3	109.8	4.6	116.7
Kenya	20.5	748.1	2.6	771.2
Liberia	4.2	249.3	11.0	264.5
Malawi	18.3	280.9	19.8	319.0
Mali	15.9	0.0	0.2	16.1
Mozambique	23.4	2.0	1.0	26.4
Namibia	0.0	0.1	0.0	0.1
Nigeria	27.9	144.4	0.0	172.3
Republic of the Congo	0.1	0.0	0.0	0.1
Rwanda	16.5	0.0	1.7	18.1
Senegal	11.5	0.0	1.5	13.0
South Africa	0.0	744.5	0.0	744.5
Tanzania	23.5	38.6	4.2	66.3
Uganda	14.9	14.9	1.5	31.3
Zambia	4.0	0.0	26.3	30.3
Asia	**311.2**	**2,989.8**	**306.4**	**3,607.4**
Asia—multiple countries	52.8	96.0	54.9	203.7
Afghanistan	0.0	265.5	0.0	265.5
Bangladesh	53.8	16.8	13.4	84.0
Burma	0.0	1.3	0.0	1.3
Cambodia	18.4	0.0	23.8	42.2
China	0.0	25.1	1.1	26.2
India	18.9	1,047.0	24.0	1,089.9
Indonesia	25.3	284.9	139.6	449.8

Summary of U.S. Climate Finance by Region and Country: FYs 2010–2015 (Million U.S. $), *continued*

Recipient Country/Region	Adaptation	Clean Energy	Sustainable Landscapes	Total
Kazakhstan	0.0	10.5	0.0	10.5
Kyrgyz Republic	0.0	2.5	0.0	2.5
Laos	0.5	0.0	0.0	0.5
Maldives	13.9	0.0	0.0	13.9
Marshall Islands	0.1	0.0	0.0	0.1
Mongolia	0.5	48.7	0.0	49.2
Nepal	21.9	1.7	12.5	36.1
Pacific Islands	56.9	1.0	1.0	58.9
Pakistan	0.2	810.6	0.0	810.9
Papua New Guinea	0.7	0.0	2.0	2.7
Philippines	16.2	24.1	19.7	60.0
Sri Lanka	2.8	0.0	0.0	2.8
Tajikistan	0.0	1.5	0.0	1.5
Thailand	0.1	250.5	0.0	250.5
Timor-Leste	10.9	0.0	0.0	10.9
Vietnam	17.4	102.2	14.4	134.0
Europe and Eurasia	**8.6**	**176.5**	**3.0**	**188.1**
Europe and Eurasia—multiple countries	1.0	27.6	1.0	29.6
Albania	1.5	0.8	0.0	2.3
Armenia	1.1	3.6	0.0	4.7
Bosnia and Herzegovina	0.2	2.1	0.0	2.3
Georgia	2.0	75.3	2.0	79.4
Kosovo	0.0	1.4	0.0	1.4
Macedonia	0.6	3.6	0.0	4.2
Moldova	2.0	3.2	0.0	5.2
Serbia	0.2	0.0	0.0	0.2
Ukraine	0.0	58.9	0.0	58.9
Latin America and Caribbean	**208.5**	**2,989.4**	**307.0**	**3,504.8**
Latin America and Caribbean—multiple countries	34.5	84.1	91.9	210.5
Antigua and Barbuda	0.8	0.0	0.0	0.8
Bahamas	2.1	0.0	0.0	2.1
Barbados	2.4	6.4	0.0	8.8
Belize	4.1	0.0	0.0	4.1
Bolivia	0.0	0.0	0.9	0.9
Brazil	0.1	87.9	39.3	127.3
Caribbean Islands	24.5	0.3	0.0	24.8

Summary of U.S. Climate Finance by Region and Country: FYs 2010–2015 (Million U.S. $), *continued*

Recipient Country/Region	Adaptation	Clean Energy	Sustainable Landscapes	Total
Chile	0.0	899.1	0.0	899.1
Colombia	12.9	74.3	27.6	114.8
Costa Rica	0.0	67.8	0.0	67.8
Dominican Republic	18.8	0.9	0.0	19.7
Ecuador	4.8	0.0	11.0	15.8
El Salvador	3.5	31.0	1.2	35.7
Guatemala	23.8	4.6	29.3	57.7
Guyana	0.3	0.0	1.0	1.3
Haiti	13.4	2.3	1.5	17.3
Honduras	16.5	191.8	3.8	212.1
Jamaica	15.4	176.1	2.9	194.5
Mexico	1.8	452.3	41.4	495.5
Panama	0.0	46.4	2.5	48.9
Paraguay	0.2	0.0	0.0	0.2
Peru	26.7	615.0	52.7	694.4
St. Kitts and Nevis	0.0	16.1	0.0	16.1
Trinidad and Tobago	1.7	0.0	0.0	1.7
Uruguay	0.0	233.1	0.0	233.1
Middle East	**107.4**	**311.2**	**0.0**	**418.5**
Middle East—multiple countries	3.0	0.0	0.0	3.0
Egypt	0.0	0.5	0.0	0.5
Israel	0.0	250.0	0.0	250.0
Jordan	0.0	57.9	0.0	57.9
Lebanon	0.9	0.0	0.0	0.9
Morocco	2.5	2.8	0.0	5.3
Other	101.0	0.0	0.0	101.0
Grand Total	**2,570.1**	**11,415.8**	**1,584.3**	**15,570.3**

Notes:

Individual country totals shown here do not include U.S. regional and global programs and U.S.-supported multilateral funds that also benefit these countries. Data presented here are current as of November 2015.

The amounts shown in the table above for country and region are combined totals for grant-based assistance, development finance, and export credit.

Included in these totals are (1) activities that were conceived and funded specifically to achieve climate-related objectives, and (2) activities that provide climate co-benefits (e.g., biodiversity and food security activities). In cases where a portion of a program's budget supports climate benefits, only that portion has been counted.

This table does not capture U.S. contributions to the ordinary capital resources of multilateral development banks, a portion of which is used to finance climate-specific activities.