



DEMOCRATIC REPUBLIC OF THE CONGO

CLIMATE VULNERABILITY PROFILE



US Foreign Assistance: ¹ (thousands USD)	Requested FY 2012	Requested FY 2013
Estimated total:	226,850	228,388
Agriculture:	8,208	8,208
Malaria:	23,500	35,000
Water:	16,000	4,671
Priority Adaptation Country in 2011:	NO	
Key Climate Stressors:	Heat	

INTRODUCTION

The Democratic Republic of the Congo (DRC) is a large, nearly landlocked country with a population of over 67 million people. The country is relatively rural, with only about 30 percent of its inhabitants located in urban areas and eight percent with access to grid-based electrical supplies. The country experiences profound development challenges, including hunger, malnutrition, and a lack of access to basic services.

The DRC holds some of the world's largest deposits of mineral resources (e.g., cobalt, copper, zinc) and harbors diverse and rich ecosystems and biodiversity, including the second largest tropical moist forest in the world. Forests and agricultural land cover about 60 percent and 10 percent of the country, respectively. The country has low lying plains in its center, surrounded by mountain terraces and dense grasslands, and its small coastline drains into the Atlantic Ocean. Climate changes are expected to augment existing vulnerabilities. In addition, future population growth, which may be rapid, could also put greater demand on water and other natural resources.

PROJECTED WEATHER AND CLIMATE CHANGES

The DRC's climate varies from hot and humid in the equatorial river basin region, to cooler and drier in the southern highlands, and cooler and wetter in the eastern highlands. The country has two short wet and dry seasons.

TEMPERATURE: Average annual temperatures range between 18°C to 32°C. Temperatures are projected to increase by about 2.7-3.2°C by the 2100s, as compared to the 1990 baseline.

PRECIPITATION: Since the DRC straddles the Equator, its northern and southern regions experience wet and dry seasons at different times of the year. The southern wet season occurs between October and April, whereas the northern wet season occurs between April and September. Average rainfall currently ranges from 1,000 mm to 1,700 mm. Climate models project that most regions within the country will experience a decrease in rainfall of 0.8-11.4 percent by the 2100s. The projections also indicate a shortening of the rainfall season in the southern region.

EXTREME EVENTS: The DRC experiences periodic droughts in the south and seasonal flooding in the east. These events are directly related to the abundance (or lack) of precipitation. Climate models do not project whether these events will change in the future.

KEY CLIMATE IMPACTS AND VULNERABILITIES

The DRC is vulnerable in several ways to projected changes in climate. First, a vast majority of Congolese livelihoods are dependent on sectors which are highly interlinked with climate processes, such as small-scale agriculture, forestry, fisheries, and mining. If the climate changes, these livelihoods may be threatened. For example, changes in temperatures and rainfall may affect crop production and alter biodiversity and ecosystem resources. Furthermore, and depending on how interactions between rainfall, temperature, and disease pathways develop, more regions of the country may become susceptible to vector- and water-borne diseases. Finally, the low-lying, coastal areas of the DRC, which are often inundated by high tides, are already susceptible to erosion. Sea level rise may cause more frequent erosion, saltwater intrusion, mangrove ecosystem damage and destruction, and infrastructure and land losses.

KEY USAID PROGRAM VULNERABILITIES

HEALTH: USAID/DRC's current health program is focused on improving basic health conditions for the Congolese people by reducing infectious disease threats; reducing maternal, infant, and child diseases and deaths; rehabilitating essential health infrastructure; and increasing access to potable water. These efforts are vulnerable to current environmental stressors and will likely become more vulnerable under future climate scenarios. For example, climate changes are projected to expand the area and population susceptible to some vector- and water-borne diseases. Furthermore, certain infectious diseases may be reintroduced to the area. Malnutrition, which is already a major concern in the country, may intensify if climate changes affect agricultural production and incomes. These impacts will also have implications for the type and quality of care that USAID can provide, as the health system will likely be overstressed and unprepared to cope with changes in the distribution and extent of health concerns.

ECONOMIC GROWTH: USAID/DRC's economic growth program seeks to increase agricultural productivity through distribution of peanut, maize, bean, and cassava seeds; strengthen microenterprises and linkages to markets; and provide natural resource management training and biodiversity protection. These projects may be vulnerable under future climate scenarios. For example, as climatic conditions change, today's agricultural practices could become less effective, potentially resulting in reduced agricultural productivity. Environmental degradation due to climate change, including impacts on forests, biodiversity, and water, could also affect productivity. Declines in agricultural productivity will likely affect farmer's incomes and impact local, regional, and national economic growth.

¹ US foreign assistance includes both USAID and Department of State program funding, but in most cases the bulk of this funding is implemented through USAID. In order to have comparable figures in these categories, all country profiles use figures from the Congressional Budget Justification (CBJ) (see <http://transition.usaid.gov/performance/cbj/1185016.pdf> and <http://transition.usaid.gov/performance/cbj/1158269.pdf>). Between the time of the budget request and the 653(a) report to Congress, these figures can change significantly.

HUMANITARIAN ASSISTANCE: USAID currently supports a number of humanitarian assistance efforts in the DRC. As climate changes, natural disasters are projected to become more damaging. Climate change may also exacerbate refugee flows from neighboring countries due to increases in conflict over natural resources, food, water, and shelter. These impacts are likely to increase the need for more frequent and sizeable investments in humanitarian assistance efforts.

DEMOCRACY AND GOVERNANCE: : USAID is supporting democracy and governance programs within the DRC that are promoting the rule of law, good governance policies, and participatory decision making. Climate changes may have negative implications for progress on good governance if the government is not able to support the country during periods of disaster or hardship exacerbated by climate change, such as a regional food or water shortage. At the same time, advances in good governance, especially at the local level, could significantly improve the effectiveness of adaptation planning and action.

ACTIONS UNDERWAY²

USAID is supporting a variety of biodiversity and natural resource management actions within the DRC that indirectly support adaptation efforts through better monitoring, data collection, and information dissemination activities. With funding from the Presidential Initiative on Global Climate Change through the Central Africa Regional Program for the Environment (CARPE), USAID is supporting national climate change mitigation efforts by reducing emissions from deforestation and forest degradation (REDD), including improved forest management and conservation and enhancement of forest carbon stocks (known as REDD+). Although to-date USAID has not focused significant adaptation resources on the DRC, the country has a high number of adaptation projects relative to other countries in the region. While most of these projects have a regional or global focus, a small number are focused on the DRC alone. The primary focus of these projects is agriculture, forestry, and energy, and they typically relate to research and capacity building. The most notable DRC-focused adaptation project is funded by the multilateral Least Developed Countries Fund and is focused on agriculture and food security.

CHALLENGES TO ADAPTATION

The DRC may face challenges in adapting to climate changes, especially in the Albertine Rift and the southeastern area of the country. The first challenge is that the country lacks the stronger legal, institutional, and regulatory framework necessary to encourage and support the adaptation process in specific regions and sectors that are likely to be impacted by climate changes. Second, while some data and information monitoring has already begun, the country needs a more systematic data collection effort that can inform regular vulnerability and risk assessments. This will be important to further research relationships between basic climate stressors (e.g., increased temperature, rainfall) and important sectors. Finally, the country requires access to more sustainable and consistent sources of financing to identify and implement required adaptation options.

RESOURCES

OECD, 2003. Development and Climate Change in Bangladesh: Focus on Coastal Flooding and the Sundarbans. <http://www.oecd.org/dataoecd/46/55/21055658.pdf>

USAID, 2012. Bangladesh. Accessed 4/23/12. <http://transition.usaid.gov/bd/>

World Bank, 2010. Vulnerability of Bangladesh to Cyclones in a Changing Climate: Potential Damages and Adaptation Cost. Policy Research Working Paper 5280. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/04/26/000158349_20100426144005/Rendered/PDF/WPS5280.pdf

World Bank, 2012. Bangladesh Country Adaptation Profile. Accessed 4/23/2012. http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCCode=BGD

World Bank, 2012. Climate Change Knowledge Portal: Bangladesh. Accessed 4/23/2012. http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisRegion=Asia&ThisCcode=BGD

² Actions underway include those from direct adaptation funds and indirectly attributed funds. More information on U.S. climate finance can be found at <http://www.state.gov/e/oes/climate/faststart/index.htm>.