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# Guyana

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## Guyana

**GUYANA'S LOW-ELEVATION COAST** hosts the majority of its population. It is predicted to become one of the world's top 10 most impacted nations from sea level rise in terms of the percentage of the population

and extent of urban area implicated. Ranging from a low estimate of 16 percent to a high estimate of 103 percent, Guyana is expected to have one of the greatest losses in gross domestic product in the Caribbean as a result of climate change. One of the poorest countries in the western hemisphere, Guyana remains reliant on foreign assistance to mitigate potential consequences. Researchers have demonstrated an urgent need to update flood control. Irrigation technologies also need rehabilitation. The name Guyana is Amerindian for "Land of Water," but the country may be losing its fresh groundwater. It has been suggested that this may contribute to coastal subsidence.

The capital city Georgetown is located along Guyana's 270-mi. (434 km.) coast. Three quarters of the national population of 765,000 lives within 20 mi. (32 km.) of the sea. This same area hosts most agricultural production. Drainage is a major problem, and agricultural irrigation systems must control seawater intrusion. The centerpiece of the outdated drainage and irrigation infrastructure is the East Demerara Water Conservancy (EDWC) Dam. This structure was developed in 1880 and holds a volume of more than 100 sq. mi. (259 sq. km.) of water, but it is currently believed to over-top and seep. Defective intake contributes to dry season water shortages.

Sea level rise in Guyana is believed to be two to five times higher than global averages. It was measured at an excess of 0.3 in. (10 mm.) annually 1951–79. Research suggests that this trend has continued. Major floods in 2005 and 2006 demonstrated an inability to clear water. The impact of the flood in 2005 has been estimated at 60 percent of GDP. Many biodiverse eco-

systems exist in Guyana, including mangroves in low-lying areas. Guyana hosts an extensive tropical forest that makes up a northern portion of the Amazon rainforest. In 2000, forests covered over 70 percent of the country, but multinational timber and mining concessions have accelerated deforestation.

Guyana ratified the United Nations Convention on Climate Change in 1994 and the Kyoto Protocol in 2003. The country has compiled an extensive climate change action plan. It is part of the Caribbean Planning for Adaptation to Global Climate Change Project. Georgetown hosts the administrative headquarters of the Caribbean Community (CARICOM). CARICOM is involved in climate change vulnerability assessments and adaptation programs.

As many countries in the region, including Guyana, rely heavily on fossil fuel, CARICOM oversees research on alternative energy. A bagasse cogeneration project is the first initiative in the nation under review for support from the Clean Development Mechanism.

**SEE ALSO:** Floods; Salinity; Sea Level, Rising.

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