



Strengthening Guyana's ability to manage flood risk in the East Demerara coastal area

Context and Objectives

Flooding is a significant risk to Guyana's population and economy as the country is exposed to rising sea levels, excessive rainfall, and inadequate infrastructure for water drainage and management. Rising sea levels have accelerated coastal erosion and led to growing encroachment of saltwater in sources of freshwater in coastal areas. This will have potentially devastating consequences for the coastal plain region, which is home to 90% of the population (including the capital city of Georgetown) and to the country's agricultural production, accounting for 27% of Guyana's GDP. Meanwhile, the Georgetown metropolitan area is set for a significant expansion after the discovery of offshore oil reserves, yet has poor waste management and disposal capacities, and there is a lack of updated information that could inform flood reduction and spatial planning strategies.

Designing a flood risk management strategy with the most accurate information available is thus an urgent priority, especially for the low-lying areas of the East Demerara region. The government of Guyana has already worked with the World Bank on the Guyana Flood Risk Management Project (GY-FRMP) to address priority flood risk management interventions.

The present technical assistance, which is financed by the European Union-funded Caribbean Regional Resilience Building Facility, managed by the Global Facility for Disaster Reduction and Recovery (GFDRR), is building climate and flood resilience in the Georgetown metropolitan area and expansion zones by reducing flood risk within the Liliendaal and Ogle drainage basins. It is also supporting routine inspection and maintenance of existing drainage systems while strengthening Guyana's hydrometeorological, flood forecasting and early warning systems, as well as Guyana's overall Disaster Risk Management capacities.

Main Activities

- 1) **Finance additional works within the Liliendaal and Ogle drainage basins:** Activities aim to reduce flood risk within the Liliendaal and Ogle drainage basins whereby several options are being explored to increase their drainage capacity. These activities will support the GY-FRMP by financing complementary flood prevention and drainage maintenance equipment to be used within the broader Liliendaal and Ogle drainage systems. Equipment will include emergency flood response and drainage maintenance equipment that will be used for no-regret channel modification interventions such as clearing of vegetation and solid waste, and dredging/deepening the secondary and tertiary drainage network in the Liliendaal and Ogle drainage basins. The equipment will also be used in the case of flood emergencies and include mobile pumps and emergency response equipment.
- 2) **Provide support for hydrometeorological monitoring and inspection and maintenance of existing drainage infrastructure:** Activities aim to improve the ability to monitor rainfall and water level in the Liliendaal and Ogle drainage basins and enhance safe and operational flood control systems. Procurement and installation of hydro-meteorological instrumentation for monitoring water levels and rainfall are being facilitated in Liliendaal and Ogle catchments. Field inspection of existing drainage infrastructure in the East Demerara coastal area are also being supported. Ultimately, a new hydrometeorological monitoring system will be installed and made operational



and the maintenance and monitoring plan for drainage infrastructure will be made operational.

- 3) **Strengthen Guyana’s flood forecasting and early warning system and capacity-building activities:** Options will be investigated to support **Guyana’s** ability to implement and use a new flood forecasting and early warning system on the flood prone coastal area, currently supported by a Doppler Radar system through the Guyana Hydrometeorological Service. Institutional capacity will be strengthened through targeted training programs, particularly for government agencies involved in flood risk management, including the National Drainage and Irrigation Authority, the Agriculture Sector Development Unit and Hydrometeorological Service under the Ministry of Agriculture.

Results

This project is not active yet.

Partnerships and Coordination

This project is being implemented by the Ministry of Agriculture’s Agriculture Sector Development Unit in coordination with the National Drainage and Irrigation Authority, the Ministry of Finance, the Ministry of Public Infrastructure and the Municipality of Georgetown. These government ministries are supported by the World Bank Latin America and Caribbean DRM team.

Country

Guyana

Caribbean Regional Resilience Building Facility component

Adaptation Facility for Leveraging Investments in Resilience in the Caribbean

Amount approved

EUR 1,650,000 / \$2,000,000: Recipient-executed activities

EUR 165,000 / \$200,000: Bank-executed activities planned for carrying out enhanced supervision of the Recipient-executed activities

Duration

06/2021-12/2022