United Nations
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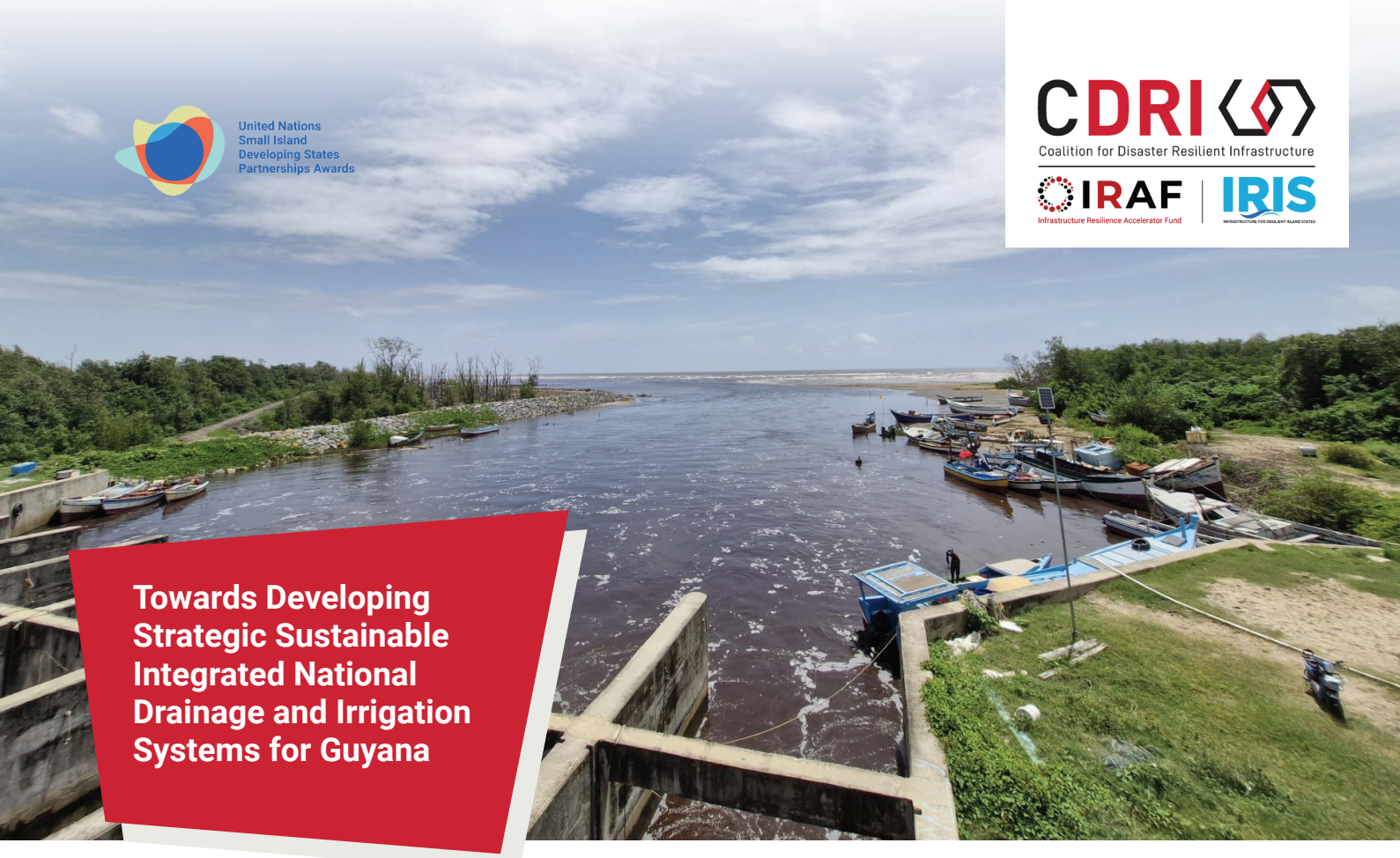

# Towards Developing Strategic Sustainable Integrated National Drainage and Irrigation Systems for Guyana

**Location:**
Guyana

**Period:**
2024-2026


## About IRIS

Infrastructure for Resilient Island States (IRIS) is a flagship initiative of the Coalition for Disaster Resilient Infrastructure (CDRI) which aims to equip Small Island Developing States (SIDS) with knowledge, tools, and partnerships to build climate- and disaster-resilient infrastructure.

SIDS face severe climate risks in addition to challenges posed by geographic remoteness, poor connectivity, and limited economies of scale. Strengthening infrastructure resilience is key to sustainable development and safeguarding livelihoods.

Through IRIS, CDRI advocates for resilient infrastructure, deploys experts, shares best practices, and funds technical support to enhance infrastructure resilience in SIDS.

## Context and Background

- Guyana is among the most climate-vulnerable countries in the Latin American and Caribbean region, with 90% of its population living in low-lying coastal areas exposed to rapid sea level rise—up to five times the global average.
- Extreme flooding, driven by high-intensity rainfall, tidal action, and inadequate 150-year-old drainage systems, has caused major economic losses—most notably in 2005 when damages reached $465 million (60% of GDP). (Guyana LCDS 2030)
- Agriculture, a key sector for food security and export earnings, remains highly susceptible to climate hazards, with floods regularly disrupting livelihoods and affecting nearly 70,000 rural households.
- Despite National Drainage and Irrigation Authority's (NDIA) strategic plans, integrated climate-resilient flood management remains underdeveloped due to limited technical capacity, lack of coordinated planning, and insufficient climate-informed adaptation solutions.

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Major floods in 2005 resulted in an estimated $52.6 million worth of damages to Guyana's agriculture sector, impacting 69,560 mainly rural households.

## Objective and Outputs

- Support Guyana's climate adaptation efforts by enhancing integrated, strategic, and inclusive drainage and irrigation (D&I) planning aligned with the Low Carbon Development Strategy (LCDS) 2030.
- Assess the potential for resilient D&I planning in Guyana that prioritizes Nature-based solutions (NbS) and Gender, Equality and Social Inclusion (GESI)
- Support NDIA in the development and publication of an updated Integrated Strategy for Drainage and Irrigation (ISDI) (2024–2029).
- Enable asset monitoring and data collection systems that help NDIA to implement their ISDI and prioritize NbS and social inclusion in D&I systems.
- Build capacity to enable resilience in NDIA.
- Share knowledge about effective D&I planning.

## Impact

- The ISDI (2024–2029) will guide NDIA's operational priorities and investment decisions, aligning with Guyana's LCDS 2030 to enhance flood resilience for 675,000 coastal residents.
- The project will identify at least two NbS interventions along 420 km of coastline across five regions, complementing hard infrastructure and delivering co-benefits for ecosystems and communities.
- NDIA's technical staff will be equipped through strategic planning and capacity-building initiatives, enabling long-term transformational change in integrated flood management.
- The project will identify financing options to implement the ISDI, facilitating efficient use of public resources and unlocking domestic and donor support for resilient infrastructure.
- By reducing disaster risk and securing coastal infrastructure, the project will promote private investment in agriculture which is essential for poverty reduction and economic growth.



### Nodal Government Agency

National Drainage and Irrigation Authority, Ministry of Agriculture

### Implementing Partner

Global Green Growth Institute

### IRIS Donors

Government of India

Australian Government
Department of Foreign Affairs and Trade

UK Government