



**Regional Nutrients Pollution Reduction Strategy:
National & Regional Implementation**

Regional Nutrients Pollution Reduction Strategy: Indicative Timeline



Adoption by LBS
COP 5 & M&E
programme

National Strategies
& Action Plans

Amendments to LBS
Protocol on Nutrients

Update Policies
& Laws

Map & Identify
Emerging Issues &
Regional Hot Spots

Functional
Intersectoral
Committees

Functioning Data &
Information
Management System

National Nutrients Reduction
Targets established &
Monitoring Mechanism in
place

Nutrient Reduction
from Projects &
Revised Policies

Transboundary
Cooperation
Established

Review & Assessment

2021 2022 2023 2024 2025 2026 2027 2028 2029 2030



CASE STUDIES FOR JAMAICA & BARBADOS ON OPTIONS FOR NUTRIENT USE EFFICIENCY & NUTRIENT MANAGEMENT VALUATION



Part of an Economic Valuation Pilot Project financed by the Global Partnership on Nutrient Management (GPNM) under UNEP Global Programme of Action for development of the Marine Environment from Land-Based Activities (GPA)

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Jamaica & Barbados Case Studies Project

Purpose

Purpose of Case Studies on Nutrient Management Valuation for Jamaica & Barbados:

- ▷ Support the Secretariat's efforts to develop new regional quantitative discharge standards for nitrogen, and possibly also for phosphorus
- ▷ Promote and instigate improved understanding of nutrient management and prevent over-enrichment through demonstrating best practices & supporting policy options to stimulate and incentivize cost-effective action, and contribute to broader environmental sustainability benefits (for Caribbean region)
- ▷ Support UNEP Caribbean priority initiative to develop National Nutrient Reduction Action Plans

Jamaica & Barbados Case Studies

Project Activities:

The case studies involved two main activities:

- A. Investigating options for the improvement of nutrient use efficiency (NUE) (e.g. application of 4R Nutrient Stewardship Concepts – Right rate, source, placement & timing), demonstrating social and economic benefits for health, environment, and the supply of food and energy
- B. Quantifying the multiple costs & benefits of meeting nutrient management targets for food security, marine, freshwater and terrestrial ecosystems, mitigation of greenhouse gases and other climate threats, and improvement of human health

Jamaica & Barbados Case Studies Background

Achieving high levels of nutrient use efficiency (NUE) in agriculture requires adoption of BMPs to maximize:

- Nutrient recovery rates (nutrient amount harvested to nutrient amount applied) in plants
- Nutrient absorption rates in livestock
- Minimize nutrient losses from emissions, leaching, run-off and erosion

Jamaica & Barbados Case Studies Background)

Wastewater reuse products include plant-available nutrients and vast potential for increasing production in cropping, pasture grasses, agroforestry, and revegetation of cleared and/or disturbed land

- Liquid fertilisers; Solid fertilisers; Dried faeces; Biomass and proteins; Water for irrigation and aquaculture; Energy supply in the form of biogas
- Before applying human waste as fertilizer it is necessary to remove harmful bacteria and pathogens that could be present. Heavy metals must be prevented from entering the food chain
- Reuse products have different characteristics and advantages involve a variety of technologies and methods for treatment, storage, and application

THANK YOU
Protecting Our Caribbean Sea, Sustaining Our Future

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