Prepared by Gaea Seychelles with input from the
Ministry of Environment, Climate, Energy and Natural Resources

POLICY BRIEF 2

Establishing a standardised and harmonised Freshwater Biodiversity Monitoring Framework for the Seychelles.

Strengthening evidence-based management and conservation of freshwater ecosystems



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Executive Summary

Seychelles' freshwater ecosystems (rivers, marshes, and swamp forests) are vital to national biodiversity and water security. However, current monitoring efforts are fragmented, inconsistent, and largely project-driven. This policy brief proposes a standardised and harmonised Freshwater Biodiversity Monitoring Framework. By unifying methodologies and centralising data, the Seychelles can move from 'snapshot' data to a consistent, long-term assessment of ecosystem health, biodiversity trends, and climate resilience.

The Problem: Current System Gap

The current lack of a unified system leads to:

- **Wasted resources:** Multiple agencies are using incompatible methods and indicators, leading to redundant spending and incomparable results.
- **Invisible declines:** Without a unified system, we have no ability to detect long-term species loss or subtle ecological shifts before they become irreversible.
- **Information silos:** Non-centralised data remains trapped within individual departments, making it inaccessible to national planners and developers.
- **Policy gaps:** We currently lack the evidence needed to evaluate the success of conservation efforts or prove our adherence to international biodiversity obligations.

Policy Objective

To create a nationally coordinated monitoring system that provides reliable, comparable, and long-term data. This framework will serve as the 'early warning system' for environmental management and national development planning.

The Monitoring Gap



'The Cost of fragmentation: Current monitoring in the Seychelles is often project-based and disconnected. Without a standardised national protocol, valuable data remains trapped in incompatible formats, preventing us from seeing the 'big picture' of river health trends across the islands.'

Call To Action: Unify Or Lose

The Risk

Monitoring that is 'project-based' dies when the funding ends.

The Need

We must transition to a sustained, state-funded programme.

Immediate Step

Secure seed funding for the Coordination Unit and standard protocol development.

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Proposed Policy Actions

1. DEVELOP NATIONAL MONITORING PROTOCOLS

- Standardised sampling: Create unified protocols for aquatic plants and animals to ensure data comparability.
- Priority mapping: Formally identify and gazette 'Long-Term Monitoring Sites' across targeted granitic islands.
- Frequency targets: Establish mandatory seasonal monitoring cycles to capture data during both wet and dry seasons.

2. ESTABLISH A CENTRALISED COORDINATION UNIT

- Inter-agency governance: Form a dedicated steering committee to bridge the gap between water management and biodiversity.
- Unified reporting: Create a single point of authority for communicating river health trends to the Cabinet.

3. LAUNCH A NATIONAL FRESHWATER DATABASE

- GIS-enabled platform: Build a secure, cloud-based hub where all agencies upload their data in real-time.
- Open-access agreements: Standardise data-sharing legalities to allow researchers and NGOs access to vital data.
- Annual report: Commit to a public-facing 'National river health report' released annually.

4. PROFESSIONAL CAPACITY BUILDING

- Certification programmes: Mandate that all field inspectors and contractors must hold a 'National Freshwater Monitoring Certificate.'
- Taxonomic training: Invest in advanced species identification workshops for native and invasive species.
- Equipment hub: Establish a national pool of calibrated multiparameter meters and sampling kits for inter-agency use.

5. INTEGRATE MONITORING INTO REGULATORY FRAMEWORKS

- EIA reform: Legally mandate the use of national bio-monitoring protocols (like miniSASS) in all Environmental Impact Assessments.
- Planning integration: Embed river health 'Ecological categories' into the national land-use and spatial planning system.

Institutional Coordination (The Unified Framework)



Measuring Success

We will track progress through:

Adoption rate:

Percentage of agencies using the new national protocols.

Data flow:

Frequency and accessibility of national river health reports. Species trends: Real-time tracking of indicator species like the Seychelles freshwater crab or Mayflies.

'Unity in Action: Establishing a Centralised Coordination Unit ensures that every agency—from the State to local NGOs—speaks the same scientific language. This harmonised approach turns individual projects into a powerful, long-term national shield for our freshwater ecosystems.'

About Gaea Seychelles
Gaea Seychelles is a research and citizen science-based organisation launched in 2018. Its mission is to empower and mobilise actions by local actors to undertake impactful environmental community-based projects which creates significant and sustained change for the betterment of people's lives and their environment.

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