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

POLICY BRIEF 5

Seychelles' Vanishing Streams

Saving our ancient freshwater heritage and endemic sentinels



Executive Summary

The granitic islands of the Seychelles are a biological 'ark' housing freshwater species that have survived for over 75 million years. Yet, freshwater habitats have undergone a significant reduction, making them the most endangered ecosystems in the country. This brief highlights the urgent need to protect endemic sentinels like the Seychelles Freshwater crab and ancient aquatic insect lineages. We must act now to prevent the silent extinction of these Gondwanan relicts and preserve the unique evolutionary heritage of our islands.

The crisis: a 75-million-year legacy at risk

Living fossils: Native macroinvertebrates, such as the freshwater prawns, as well as fish and mayflies, are Gondwanan relicts that provide a direct link to the prehistoric past.

The silent extinction: Because these species are small and live underwater, their disappearance from rivers often goes unnoticed by the public and policymakers.

Habitat fragmentation: Construction, pollution, and land clearing are turning once continuous rivers into isolated, polluted pools where natives cannot survive.

Why our ancient freshwater heritage and endemic sentinels matter

Ecosystem engineers: Aquatic animals process organic debris and filter nutrients for free, maintaining the high water quality required for human consumption and agriculture.

The 'Early warning' system: The sentinel species are highly sensitive to pollution and silt. Their disappearance provides a real-time report card on the health of our national water supply.

The foundation of the 'Ridge to Reef' economy: Healthy river biodiversity prevents the downstream choking of our coral reefs. Protecting these aquatic sentinels is a direct investment in the health of our Blue Economy and tourism sector.

Why freshwater biodiversity matters?





The silent warning: Caddisflies as sentinels

The Problem:

Caddisflies, key bioindicators of clean water, are entirely absent from several downstream sites. Their disappearance indicates chronic pollution levels.

The Impact:

- Ecological collapse: Without these 'clean water' species, the food web supporting fish and birds breaks down.
- Legal failure: This absence highlights a direct failure to meet the water quality standards of the Environment Protection Act 2016.

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Priority recommendations

ESTABLISH FRESHWATER PROTECTED ZONES
Identify and legally gazette Freshwater Key Biodiversity Areas (KBAs) in critical catchments to safeguard native strongholds.

LAUNCH A 'SAVE OUR SENTINELS' INVENTORY
Conduct a comprehensive national census of freshwater biodiversity to fill the current taxonomic data gaps.

IMPLEMENT RIDGE-TO-REEF BUFFER ZONES
Strictly enforce a 5-meter 'No-Clear' zone along all riverbanks to maintain the cool, shaded conditions required by sensitive native species.

PUBLIC HERITAGE EDUCATION
Integrate freshwater ecology into the national curriculum, teaching students that 'The Life in our Rivers' is as unique as the Coco-de-mer.



Call To Action: Unlock the national treasury







The Problem:
We cannot protect what we have not yet inventoried. Current data gaps on aquatic species are the greatest 'thieves' of our national heritage.

The Solution:
- Support the inventory: Fully fund and operationalise the National Freshwater Biodiversity Database to unify records from the Seychelles islands.
- Join the search: Empower local Citizen Scientists and NGOs to help map the distribution of our Gondwanan relicts.
- Invest in the future: Secure long-term funding through the SeyCCAT Blue Grants Fund and the Environment Trust Fund to turn local knowledge into permanent national protection.

The Outcome:
A complete, digital map of our freshwater wealth ensuring that the Seychelles' ancient sentinels are never lost to history.

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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