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Existing sea level stations in Seychelles

Presented by:
Write name of
presenter here.

Date Presented:
September 2025

1.0 Current active sea level monitoring

- Past Experience of sea level monitoring

2.0 Services/Products that can be delivered

3.0 Needs and gaps

4.0 Potential locations for new stations

- Main areas under threat

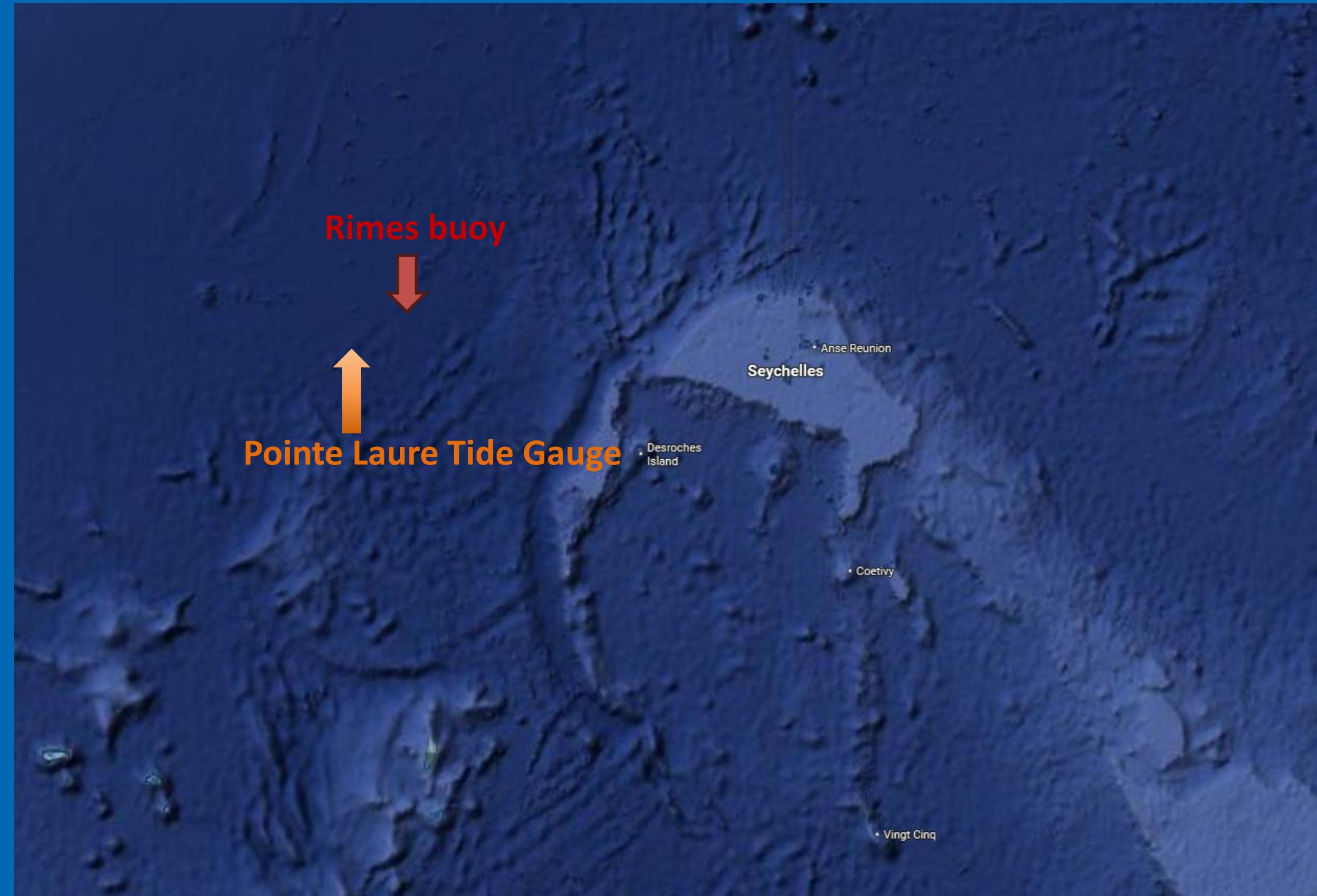
5.0 Type and Placement of Stations

6.0 Summary

1.0 Current Active Stations in Seychelles

Status of the stations

- a) Pointe la Rue: Active and performing well
- b) Rimes Buoy:
 - Not all data sets are available
 - Has a problem with the battery





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Other stations

St. Denis Island Station: Non-operational.

❑ Discussion points:

-Revival of St. Denis Island station not possible under SEAMARCS.

❑ Recommendation:

-Focus on communication with Hawaii first; replacement as secondary option



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Past experiences of Sea Level Monitoring and Lessons- learned

- ❑ Overall Lesson: Proactive maintenance, strategic upgrades, and collaborative partnerships are vital to sustaining effective monitoring systems.

Pointe la Rue Station(Rawinsonde Jetty): Active but structurally damaged; plans with Hawaii underway for repair or replacement.

Ile Denis Station: Non-operational, no current plans with Hawaii.

Key Insights:

- ❑ Limited station coverage has caused data gaps, highlighting the need for expansion.
- ❑ Consistent maintenance is crucial, as seen from Ile Denis's failure.
- ❑ Routine care keeps Pointe la Rue functional, though upgrades are needed.
- ❑ International collaboration, like with Hawaii, enhances project effectiveness.
- ❑ Modernizing technology is essential for improved monitoring.



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2.0 Services/Products that can be delivered



Early Warnings:

- Timely alerts for floods, strong wind, heavy rainfall, tsunami warning and modeling.

Data Sharing:

- Contribution to a regional data platform to address the lack of data sharing across Africa, with options like Internet, GPRS/cellular, FTP, and satellite-free via NOAA.

Marine :

- Weather, SFC wind, Wave height, Forecast, wave period, State of the Sea, ssts, Wx outlook, Swell wave monitoring



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Flanders
State of the Art

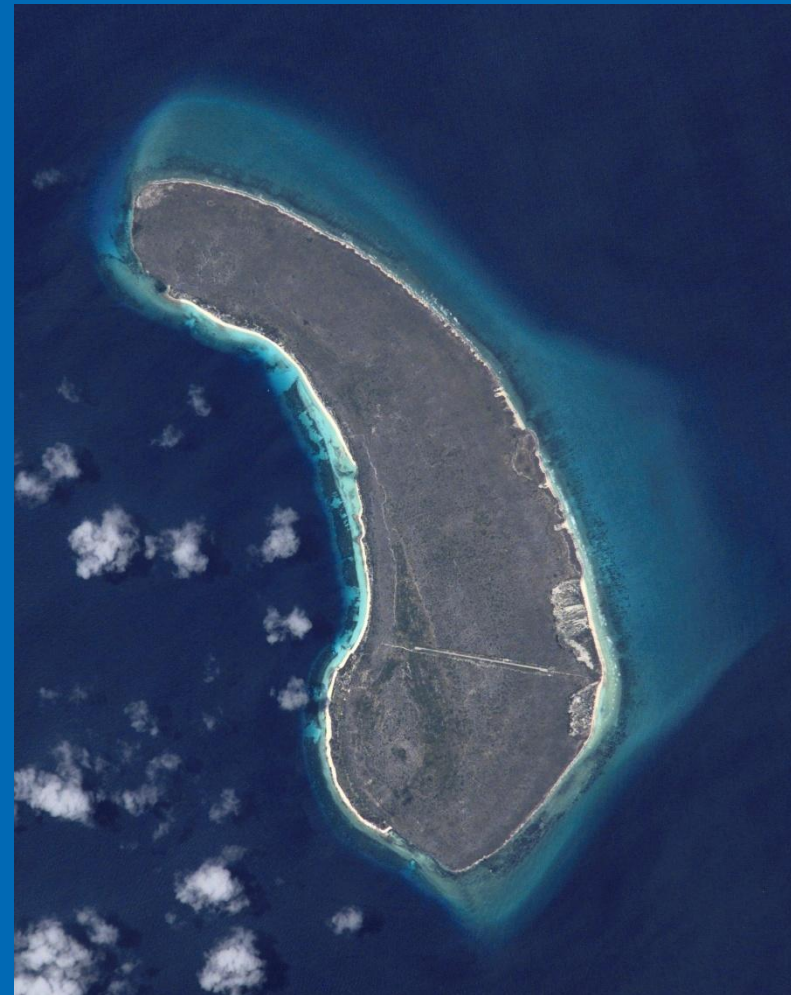
3.0 Needs and gaps

Needs: Replacement or repair components for Pointe la Rue, installation of new stations, and training to ensure effective management.

Gaps: Insufficient southern coverage, limited maintenance resources, and absence of a data-sharing infrastructure.

4.0 Potential locations for new stations

Assumption Island



Pros: Strategic location for monitoring cyclones, monsoons, and volcanic tsunamis; in development and near an airport for accessibility.

Cons: Communication system issues pose a challenge, requiring reliable broadcast solutions like GPRS/cellular or satellite options.



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Potential locations for new stations

Western Coast of Mahé



Pros: Enhances overall coverage with additional data points.

Cons: Requires site assessment to determine optimal placement.



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Main areas under threat



Main Areas at Risk:

Aux Cap:

- Frequently experiences flooding from high tides.

Northeast Point:

- Vulnerable to storm surges impacting residential areas.

Anse La Blague:

- Prone to coastal flooding during extreme weather events.

Denis Island



Pros: Utilizes existing location if viable, ensuring continuity.

Cons: Current condition unknown, necessitating a site visit and potential new installation.

5.0 Type and Placement of Stations

Station Options:

- Option A: Three stations (approx. USD 15,000 each).

Recommendation:

Seychelles recommends Option A for increased coverage and data collection.

- Data Transmission: Free/low-cost options available (Internet, GPRS/cellular, FTP, satellite-free option via NOAA).

Summary

Seychelles proposes the following locations for consideration:

1. Assumption Island (Area 3, southern Seychelles): Strategic for cyclones, monsoons, and volcanic tsunamis.
2. Western Coast of Mahé: To enhance coverage.
3. Replacement of St. Denis Island station or other priority coastal site.



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THANK YOU