

## Executive Summary

This proposal has for main aim to put forward measures to control erosion at a site which is part of State Land being the Pas Geometriques in front of Terrain Basset and leased to Societé Jacsyl. The proposal has been worked out following ongoing severe beach erosion occurring on the sea frontage of the said plot of land. The erosion has left the seaward boundary scaped and escarpment of more than 1.5 m can be seen. The sea is progressing landward and has gain more than 10 m since 1967. Measures for controlling erosion at the site are important with the view to ensuring sustainability and stability of the beach dune at the site.

The proposed measures to control erosion are listed in the first schedule of the Environment Protection Act 2002 as undertakings requiring an Environment Impact Assessment. Hence, this present report aimed to:

- assess the environmental characteristics at the site and in surrounding regions,
- consider the best measures that will ensure a sustainable control of erosion at the site
- put forward the most appropriate protective measures with the view to control beach erosion at the site
- Provide all information required to secure an EIA licence to implement the protective measures and their maintenance.

The study has come to the conclusion that the best approach to control erosion at the site would be through the following distinct but related measures which shall have to be implemented using a phased approach.

- 1) Construction of permeable breakwater structure
- 2) Elevating height of existing natural rocky outcrop in the lagoon
- 3) Beach reprofiling

The maintenance required for the proposed measures to control the erosion at the site have also been worked out as well as the construction of wire-mesh fence along seaward boundary of the site.

The study came to the above proposals based on sound scientific methodology while making use of the appropriate technology and tools including GIS and Remote Sensing. The present study comprises of the following:

- Aerial photos and satellite image processing and interpretation
- Lagoon bathymetry and nearshore topography
- Marine ecology
- Oceanographic and climatological parameters
- Review of relevant papers and literature search

The design process for the proposed measures has been crucial as emphasis was made upon protection and preservation of the natural characteristics of the coastal and marine environment which has contributed enormously to mitigate the impacts at design level.

It is anticipated that the proposed measures would be favourably considered and that the necessary EIA licence is issued for implementation of the work and their maintenance.