



Assessment of Proposed Astera Development Project Site

On December 15, 2008 a TIDE team conducted a Rapid Assessment of the proposed Astera Development project site, located just south of Punta Negra (16.271532, -88.559915).

The goal of the Assessment was to gather baseline data on the development site. A series of assessments were carried out, including: vegetation, benthic cover, sea grass and existing dredged area.

During the Visit the general weather condition was sunny with the sea state being choppy.

Vegetation

The proposed development area has already been disturbed, some of the vegetation has been removed or disturbed by fire, approximately 50 meters inland from the sand dune the vegetation has been cleared and overgrown. Further inland the dominant vegetation are palmetto stands recently burnt.



Within the first 50 meters inland the vegetation included a few cultivated fruit trees. These trees include: 1 mango tree, several citrus trees, a small cane patch, 2 almond trees and coconuts on the sand dune in front of the shoreline. The Native

vegetation of the area which was button wood and white mangrove was scarce, with the few existing trees damaged by fire. Several small ponds were identified within the area. These ponds were overgrown with aquatic grasses measuring 2-2.5 meters tall. Most of the cleared area had short grasses mixed with dandelion. The general ecosystem type of the area can be described as Tropical Littoral Forest and Beach Communities.



Infrastructure and Equipments at proposed Project Site

One small house was on the project site. The house was part of a fishing lodge in the past.



In front of the existing house are remnants of other structures colonized by termites. Equipments on site included two large excavators and a generator.



Personnel on Site

When we arrived at the project site only the watchman was present. After we completed the assessments the dredging contractor, Mr. Peter Dueck, from Spanish Look out in the Cayo District arrived, he was accompanied by workers. After they discharged their vessel we interviewed him briefly. During the interview he said that he had a dredging permit from the Geology Department to dredge a small brackish water outlet on the Southern End of the property. This dredging was to accommodate boats; he didn't know the length of the channel.

Marine Assessment

We took a number of measurements in the marine environment, directly bordering the site:

- Salinity – 32.1 ppt
- Temperature – 28.5 °C
- Dissolved Oxygen – 56.1%
- pH – 6.0

Between the shoreline and the channel, the benthic cover consisted of sand with small patches of *Halodule wrightii* seagrass and bushy red algae. Beyond the channel, the benthic composition changed to *Syringodium filiforme* and *Thalassia testudinum* seagrass beds.



The channel running parallel to the shore was untouched, however, a channel running at right angles to this and into shore was newly dredged specifically to allow access for a barge carrying the 2 excavators. The area dredged was approximately 17m x 55m x 0.86m. The sand removed from the channel was piled to one side and broke the surface of the water.



The site will be regularly monitored during the land clearing process which is expected to take a minimum of two months. Water quality will be recorded along with changes in benthic marine cover and land vegetation cover.