

### WEDA 34 TAMU 45



# Beach Restoration of Coastal Town to Increase Tourism

Presented by:

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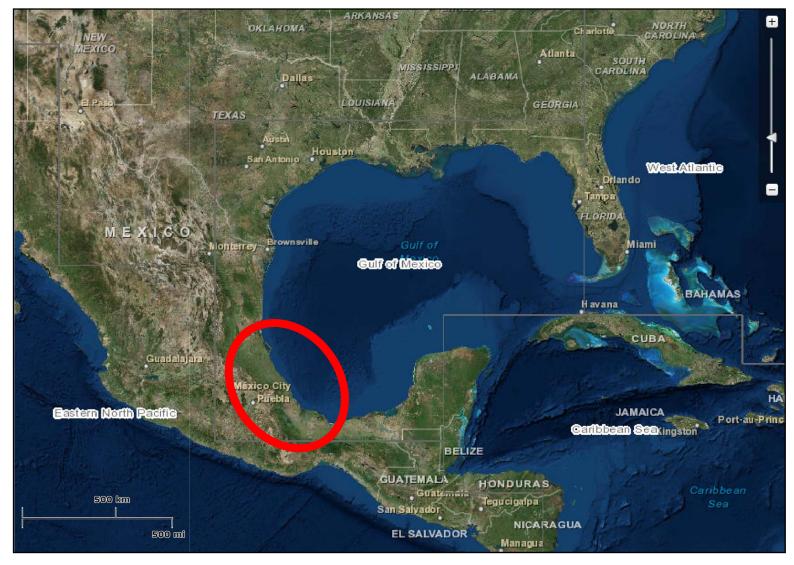
TenCate Geosynthetics. Pendergrass, Georgia.







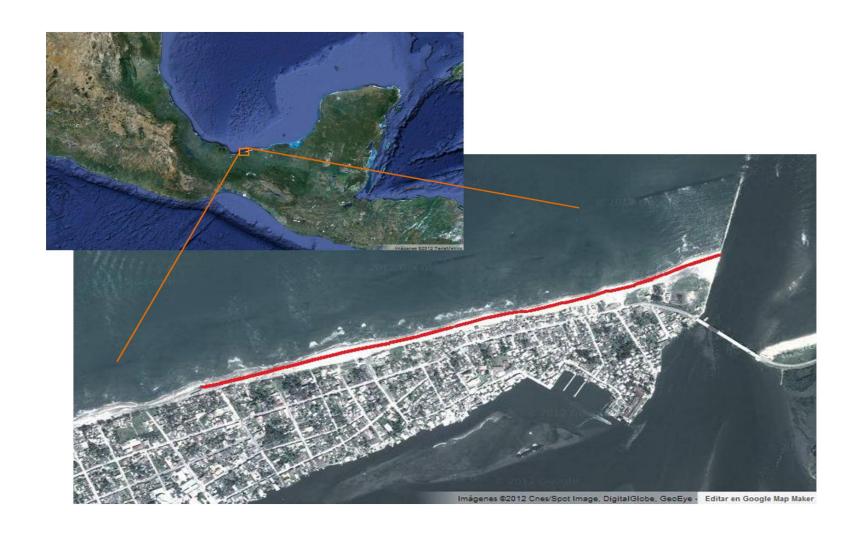
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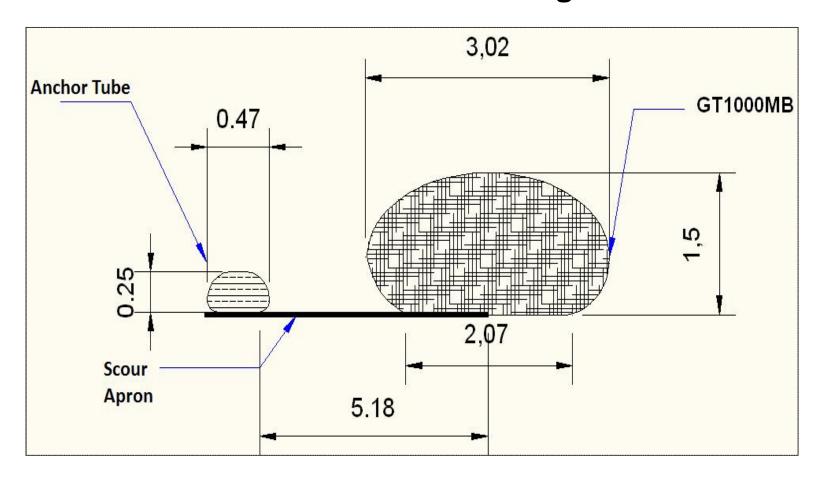








## **2008 Test Section Design**



### **2008 Test Section**

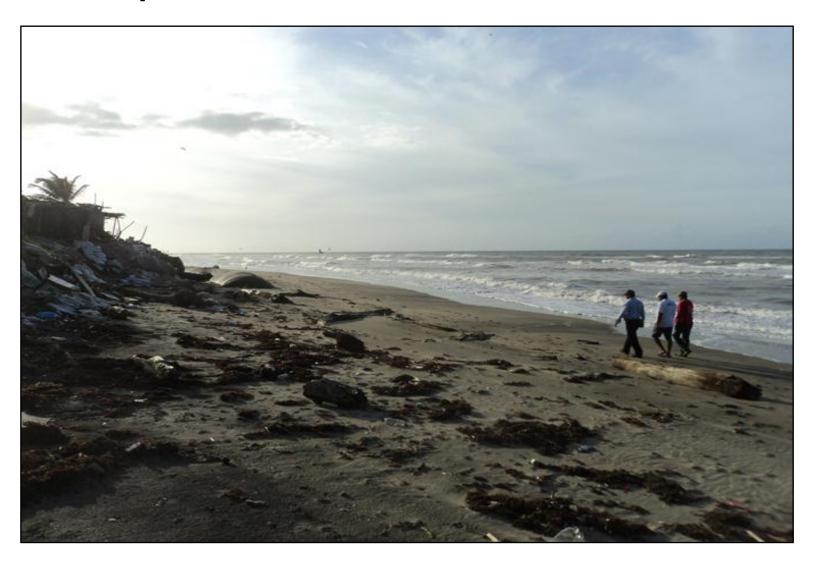




### 2008 Geotube® Test Section



## 2010 Tropical Storm Beach and Sand Dune Erosion



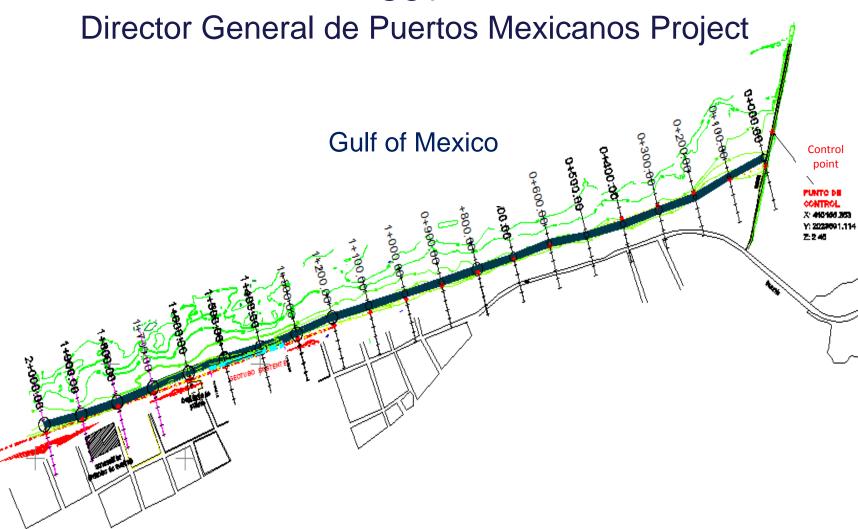
### **2010 Tropical Storm Damage**





ZONE FROM THE MARINE PORT ADMINISTRATION TO THE NAVY POST





### **Fast Track Project**

- Demolition, Clearing, and Leveling
- Geotube® Installation
- Dredging to backfill the void between the Geotube® units and the sand dune.



### **Project Construction**









### **PROJECT Progress**





90% Complete



## **August 2012 Hurricane Ernesto**





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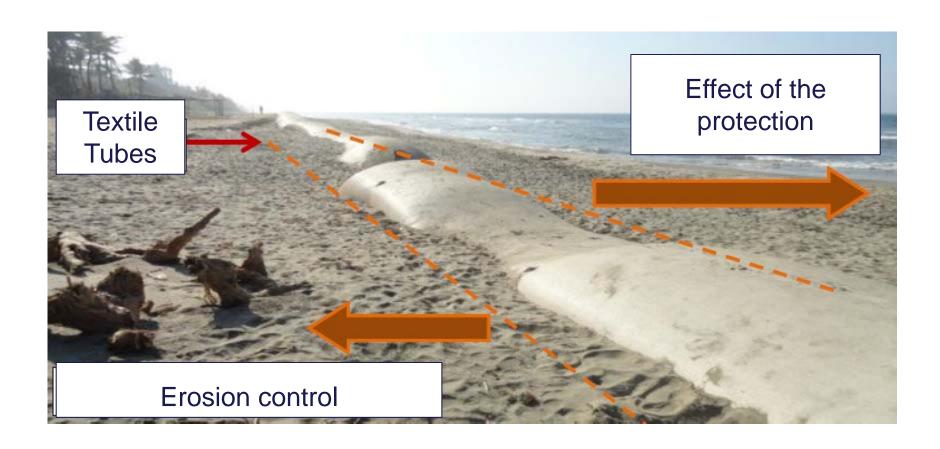


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## **BEACH RESTORATION**

**Sanchez Magallanes 2013** 







#### Conclusion

- Geotube® Shoreline Protection Structure withstood direct hit by a Class 3 Hurricane without serious damage
- Structures sustained only wind damage
- Beach and Sand Dunes left intact with minimal erosion





## Questions are welcome.

Thank you for your interest.

A. H. Diaz-Núñez Geomembranas y Geosintéticos SA de CV, Mexico, D.F.

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## Project Scope & Equipment

Project includes the installation of 2,304 linear meters (7,560 linear feet) of 7.6 meter (25 feet) circumference geotextile tubes.

For scour protection, 2,304 linear meter (7,560 linear feet) of a 5.18 meter (35-feet) wide scour apron was used. The apron was attached to the bottom center line of the tube.

All fill material for the tubes and anchor tubes was pumped from surrounding area.

Equipment used for the installation: 8-inch suction dredge, (2) amphibious track hoes, (1) work/storage barge, (1) crew boat.





### THE INSTALLATION PROJECT





END OF THE PROJECT BETWEEN "LOS PINOS" AND "EL BAÑIARIO"















