



## *Coastal Dune Protection Using ACETube® in Mexico*

*Location: Las Coloradas, Mexico*

*Application: Coastal Protection; Sand Dune Reinforcement*

### **Problem :**

In 2005, the beaches and coastal dunes at Las Coloradas were attacked by Hurricane Wilma. Due to the destroyed coastal dunes, the lagoons which are used to produce salt and they are major income source for that region were vanishing. Since the lagoons have an important economical benefit, protecting the region while offering an environmental and economical solution is vital.



### **Solution :**

To protect the region from further damage caused by hurricanes, ACE Geosynthetics has done an ACETube® application in cooperation with Axis Ingenieria and ML Ingenieria for Industria Salinera de Yucatan in Mexico. ACETube® is filled from a hopper to the filling ports with the pumping seawater and dumping sand from an excavator producing slurry as filling materials. Once ACETube® are filled, they would be covered with sand to reach design height. Right after the construction is completed, dunes started natural vegetation's growth. Periodically the conditions of the tubes are checked and after the 2006 storm season from October through December, some parts are needed attention but don't influence the safety of whole structure. In conclusion, the whole structure provided the well performance in the salt production lagoons protection without affecting coastal process and natural evolution of surrounding beaches. In terms of environmental impact which is a priority concern in every coastal project, the flexibility of ACETube® represents a great alternative after individual designed.