Private Coastal Mesonet designed for windsurfers proves valuable for variety of public sector needs.

MARAK SERVICES, a meteorological company specializing in coastal wind monitoring and forecasting, has installed the world's largest private coastal mesonet. The mesonet is comprised of approximately 200 stations along the coastal U.S. including the Great Lakes. This private weather network was born from the need for hi-resolution data for the sailing and windsurfing communities. If fact, an inadequacy NWS network of surface observing, as well as NODC C-MAN, data sites located in the near-shore coastal zone was the impetus for the MARAK business model. Mariners have long known that existing weather data collection sites fail to record, thus capture the complex nature of near-coastal wind flows. The MARAK mesonet has filled this need. That is, the Marak mesonet was specifically designed to collect hi-resolution real-time data to augment the existing NWS network and provide the ground truth necessary for observing and forecasting complex coastal flows accurately.

Over the last 15 years, coastal sailors and windsurfers have come to rely on accurate wind data and forecasting provided by Marak. In the last few years, numerous public agencies including the Department of Defense, NWS, and the US Coast Guard have also tapped into this unique data stream. These public agencies have realized the value of this private sector data for a variety of critical applications including:

- Homeland security
- **❖** Maritime navigation
- Emergency crisis management
- Emergency response
- Environmental research
- Meteorological studies
- Wind energy studies
- * Recreation.

Public / Private cooperation: Operating in the private sector, Marak developed unique and cost-efficient means to gather and disseminate high quality meteorological data. From pinpoint collection of data to meteorological analysis, a range of technical solutions was implemented to meet specific needs, budgets, and uses. MARAK designs and builds its own data-loggers, keeping costs down while incorporating the latest technological enhancements. MARAK installs its own weather sites with he needed meteorological expertise to collect a truly useful dataset for a growing variety of interests. MARAK archives and quality-controls the data stream, insuring once again, a highly useful set of data products. Finally, MARAK delivers the data via a variety of methods including graphical data presentations on the web, ready-made NWS compatible text stream via push or pull methods, delivery via wireless devices, and easy to access data archives.

For the Public sector, this represents a unique opportunity to tap into a vital data resource in a cost-effective manner. The Marak meteorological group has developed a complete system for enhanced monitoring of climate in the near-shore coastal environment. Its value continues to increase as more and more groups tap into its resources. MARAK hopes that its model of a private company solving the need for increased weather data in the coastal zone receives the endorsement of the public sector.