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**MEETING EXPLORES SENSOR TECHNOLOGY  
for REMOTE, INTERACTIVE AQUATIC EXPERIMENTS**

Oceans, lakes, rivers, and groundwater are complex, dynamic environments in which physical, chemical, and biological processes occur over varying temporal and spatial scales (e.g., eddies,

The first working group recommended the following criteria to prioritize the chemical and biological sensors needed to address fundamental science questions during the next decade.

Sensors that are now operational, but could be better utilized.

Individual sensors or suite of sensors that require additional development.

Sensors that need to be developed.

Some sensors, for example pCO<sub>2</sub>, pH, nitrate, fluorometers, and spectral radiometers, are currently operational on moorings, but long deployments may be limited by biofouling.

Biofouling came up repeatedly as a problem that must be resolved. A combination of optical (i.e., absorption, transmissometers, and fluorometers), O<sub>2</sub>, and pCO<sub>2</sub> sensors was given as an

Several directions for broadening the application and use of sensors were considered. Sensor designs could be simplified so that non-experts can use them. Sacrificing precision should be evaluated in terms of the process being measured and whether it increases instrument reliability or reduces the level of expertise needed to maintain the instrument. Alternatively, sensor designs could be made more complex, whereby an intelligent sensor would perform the function of the expert technician. Smart se