

xylem

Environmental  
monitoring



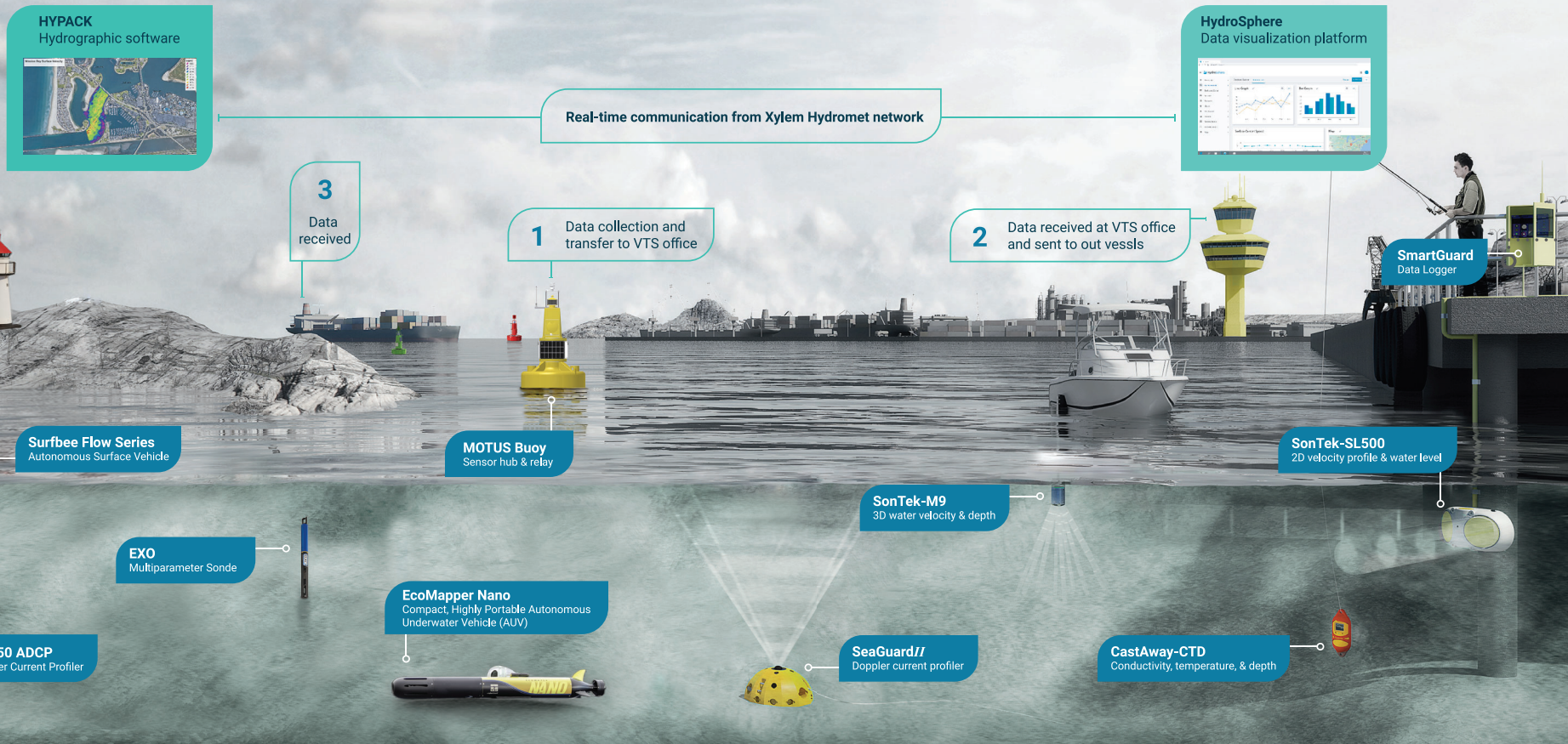
# Ocean and coastal monitoring solutions

From shore to deep ocean



# Ocean and coastal monitoring solutions

Integrated systems offer complete solutions for oceans, coasts, ports, and harbors



## Complete monitoring solutions

- Wave and multilayer current monitoring systems
- Water quality monitoring systems
- Real-time data access via web or AIS
- Buoy, lantern, and AIS systems
- Autonomous survey systems and software
- Hydromet systems

**OCEANOGRAPHY**  
 ENVIRONMENTAL MONITORING COASTAL RESEARCH  
**AQUACULTURE** OCEAN OBSERVATORY  
 SYSTEM INTEGRATION DREDGING  
**OIL & GAS RECOVERY PORTS & HARBOR**  
 WEATHER MONITORING OFFSHORE INSTALLATION



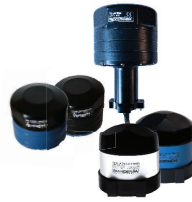
## Currents

Ocean currents are driven by winds, tides and density differences. The ocean circulation regulates the earth's climate by transporting heat. The flowing water affects offshore and coastal construction and also carries particles, animals, plants, nutrients, pollutants and dissolved gases.

### Aanderaa DCPS & DCS

The Doppler Current Profiler Sensor (DCPS) is a medium-range, 600 kHz current profiler smart sensor. It offers high-quality ocean current measurements and is ideally suited for cabling directly to various systems or dataloggers via serial or AiCap bus. With integrated compensation for tilting and movement, the sensor is commonly used to measure current from buoys and other moving platforms. The Doppler Current Sensor is a rugged, true vector averaging current sensor for measuring current speed and direction in the sea.

[aanderaa.com/stand-alone-current-sensor](http://aanderaa.com/stand-alone-current-sensor)



### Aanderaa SeaGuard

SeaGuard// is a versatile datalogger with multisensor support and the option to use either DCS or DCPS. It's a self-recording instrument that integrates real-time features tailored to various applications.

[aanderaa.com/profiling-current-meter](http://aanderaa.com/profiling-current-meter)



### Aanderaa 250-ADCP Coastal profiler

Aanderaa 250-ADCP, a compact, medium-range Acoustic Doppler Current Profiler designed to make high-quality current measurements simpler and faster across coastal and near-shore applications. With a five-beam configuration at 250 kHz, embedded sensors, and streamlined setup, it delivers dependable profiles with minimal hassle.

[aanderaa.com/profiling-current-meter](http://aanderaa.com/profiling-current-meter)



### Aanderaa RCM Blue

The RCM Blue is a self-recording current meter designed to measure water temperature in both saltwater and freshwater environments. It can be equipped with a pressure sensor to determine precise depth, offering an accuracy of 0.01%. Additional sensor types can also be integrated to suit specific monitoring requirements. This instrument is widely favored for site surveys due to its reliability and flexibility.

[aanderaa.com/bluetooth-recording-current-meter-rcm-blue](http://aanderaa.com/bluetooth-recording-current-meter-rcm-blue)



### SonTek-M9

The SonTek-M9 is a nine beam multi-frequency ADCP designed to collect bathymetric, water column velocity profile, and acoustic bottom tracking data as part of a hydrographic survey.

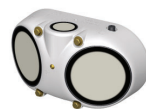
[ysi.com/sontek-m9](http://ysi.com/sontek-m9)



### SonTek-SL Doppler current meter

The SonTek Side-Looker is a long-term monitoring solution available in two models for horizontal profiling and water level combined in one single instrument.

[ysi.com/sontek-sl-series](http://ysi.com/sontek-sl-series)



## Ocean waves

There are a range of technologies to measure ocean waves including microwaves from space, various radars and spot measurements from below or at the surface.

### Directional wave buoy

The MOTUS (movement in Latin) wave buoy is a perfect solution for collecting environmental data in coastal areas. The platform used for collecting data is the robust MOTUS buoy which has proven to be an excellent platform for providing high accuracy and reliable hydrological, meteorological, and oceanographic data parameters.

[aanderaa.com/motus-buoy](http://aanderaa.com/motus-buoy)



### Aanderaa Wave and Tide sensor

The Wave and Tide Sensor 5218 is a compact fully integrated sensor for measuring wave and tide conditions. The sensor is a compact intelligent sensor designed to be used with Aanderaa SmartGuard or SeaGuard as well as in other measuring systems.

[aanderaa.com/Wave-sensors](http://aanderaa.com/Wave-sensors)



### Aanderaa SeaGuard// DCP Wave

The swiss army knife of ADCPs, your optimal solution to measure acoustic based directional waves, currents and water quality. For wave measurements, this ADCP uses an adaptive pulse technology that automatically switches between 3 different acoustic modes (broadband and narrowband) to optimize wave measurement accuracy.

[aanderaa.com/SeaGuardII-DCP-Wave](http://aanderaa.com/SeaGuardII-DCP-Wave)



### MOTUS stand-alone sensor

Turn your buoy into an intelligent data-collecting platform with the Aanderaa MOTUS Wave Stand-Alone Sensor. There are numerous ways of measuring ocean waves and at Aanderaa, we focus on three measurement types: pressure, acoustic, and motion.

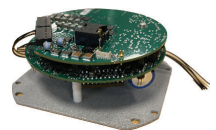
[aanderaa.com/motus-stand-alone](http://aanderaa.com/motus-stand-alone)



### MOTUS Lite OEM sensor

The MOTUS Lite OEM version is the bare circuit board version of the Aanderaa MOTUS Sensor, intended for integrators and buoy manufacturers. The sensor is delivered without housing and cables and is not a complete solution but a component to be used in the customer's solution. It is intended for commercial as well as research use. The sensor processes wave data and is configurable to present parameters and wave spectrum directly. The sensor can be connected to most dataloggers through the RS-232 interface.

[aanderaa.com/motus-stand-alone](http://aanderaa.com/motus-stand-alone)





## Data delivery

Marine data is only useful once it reaches its intended end user. A reliable data management and delivery system starts with sensors and instruments that enable end-to-end data transmission of rich data sets.

### Aanderaa SmartGuard

A data logger designed for easy setup and integration with Aanderaa sensors as well as a range of third-party sensors. Tailored for Hydromet stations and data buoys with a wide range of telemetry options such as 3G modem, AIS, VHF/UHF radio, Iridium, and GOES. Users can connect to the logger 3 ways: LAN, Serial Port or USB.

[aanderaa.com/smartguard](http://aanderaa.com/smartguard)



### Surfbee Flow Series ASV

Surfbee is a modular, high-performance autonomous surface vehicle designed for water quality and quantity monitoring. Built with a rugged inflatable hull, it features dual GNSS with heading for reliable navigation, precision thrusters for consistent transects, and onboard batteries that can power connected sensors.

[ysi.com/surfbee](http://ysi.com/surfbee)



### Ecomapper Nano

EcoMapper Nano is a compact autonomous underwater vehicle (AUV) compatible with the full line of EXO-S Multiparameter Sondes and equipped with a Doppler Velocity Logger (DVL) to collect data throughout the water column. This vehicle operates autonomously during planned missions.

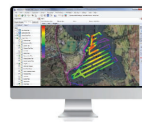
[ysi.com/ecomapper-nano](http://ysi.com/ecomapper-nano)



### HydroRIG

[ysi.com/hydrorig](http://ysi.com/hydrorig)

HydroRIG is an all-in-one IoT gateway device that makes environmental monitoring smarter, faster, and easier. Deploy it at new or existing sites to connect your field instruments to the cloud through HydroSphere, and start receiving data from Xylem or third-party sensors.



### HYPACK Hydrographic software

[xylem.com/el-gr/brand/hypack](http://xylem.com/el-gr/brand/hypack)

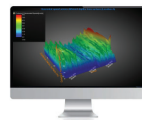
HYPACK provides all the tools needed to design your survey, collect hydrographic data, process it, reduce it, and generate final products - or just positioning your vessel in an engineering project.



### HydroSphere

[ysi.com/HydroSphere](http://ysi.com/HydroSphere)

HydroSphere is a collaborative web-based data visualization platform for environmental monitoring. Take full control over how you view, manage, and respond to your environmental data, with flexible, user-driven features. With HydroSphere, you can connect and upload data from a wide range of instrumentation, create custom dashboards for quick analysis, and set data-driven alarms with configurable notifications.



### Data Studio 3D

[aanderaa.com/datastudio3d](http://aanderaa.com/datastudio3d)

Data Studio 3D is a free data analysis software available to Aanderaa SeaGuard and SmartGuard users. To aid in data analysis, Aanderaa has developed their own proprietary software, Data Studio 3D which allows users to download field data and plot them on different graphical plots. This mode of data analysis can be carried out within minutes to help user to compare parameters, view trends, anomalies, and to control the data quality.



## Water quality

Maintaining optimal water conditions is essential for healthy and productive aquaculture systems. Modern water quality sensors continuously monitor key parameters such as dissolved oxygen, temperature, pH, salinity, and turbidity – providing real-time data that helps farmers respond quickly to environmental changes.

### Aanderaa Standalone Smart Sensors

Aanderaa Smart Sensors process data, including linearization, scaling, and necessary compensation in the sensor to output engineering values. Sensors available are serial and AiCaP bus sensors: Doppler current sensor, Oxygen optode, Turbidity, Pressure/Tide/Wave, Conductivity/Salinity, and Temperature sensors.

[aanderaa.com/applications](http://aanderaa.com/applications)



### SonTek CastAway-CTD

The SonTek CastAway-CTD is a handheld deployable conductivity, temperature, and depth instrument for hydrographic profiling. An integrated LCD screen displays an intuitive user interface for deployment and immediate review of collected data including both statistics and profile plots.

[ysi.com/castaway-ctd](http://ysi.com/castaway-ctd)



### YSI EXO™ Sondes

The EXO Sonde Platform represents the latest in long-term monitoring and early warning detection. User-replaceable smart sensors, combined with a central wiper, ensure quality data collection over extended deployments. EXO Sondes measure a wide variety of parameters: Conductivity, Temperature, Dissolved Oxygen, pH, ORP, Turbidity, Total algae, fDOM, Nitrate, and more.

[ysi.com/EXO](http://ysi.com/EXO)



### Aanderaa Tide Sensor

The Wave and Tide Sensor 5218 is a compact fully integrated sensor for measuring wave and tide conditions. The sensor is a compact intelligent sensor designed to be used with Aanderaa SmartGuard or SeaGuard as well as in other measuring systems.

[aanderaa.com/Wave-sensors](http://aanderaa.com/Wave-sensors)



### YSI Nile Radar Sensor

The Nile Radar offers a non-contact water level solution with SDI-12 communications that allow for easy integration with many water monitoring platforms.

[ysi.com/nile](http://ysi.com/nile)



# Xylem | 'zīlāmī

- 1) the tissue in plants that brings water and nutrients upward from the roots.
- 2) a leading global water solutions company.

Xylem is a leading global water solutions company dedicated to advancing sustainable impact and empowering the people who make water work every day. Xylem connects diverse capabilities and innovative technologies to provide tailored solutions across the entire water cycle. From moving, treating and measuring water to optimizing and maintaining water systems, Xylem collaborates with customers to solve their most critical challenges. Together, through partnerships with utilities, industrial manufacturers, building operators, and communities, we are building a more water-secure world.

**For more information on how Xylem can help you, visit [xylem.com](http://xylem.com).**



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