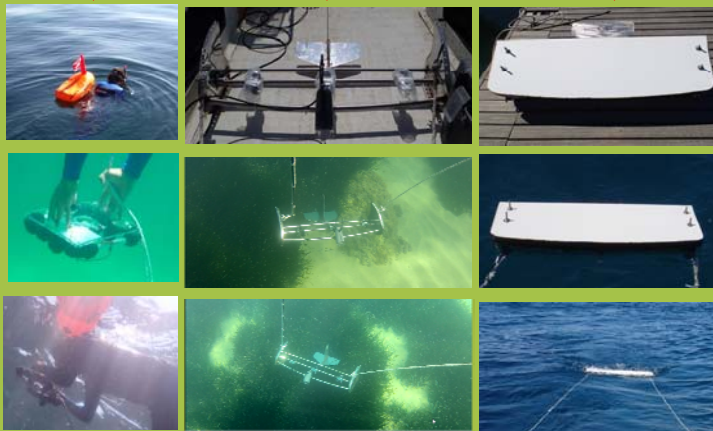


The project Svi.Str.In involves the testing of new instruments and technologies, 3D modeling, softwares for image analysis and multimetric indices to be used for monitoring, control and verification of the conservation status of *Posidonia oceanica*. Since a part of the project dealt with a prototype of a towing vehicle that can contain 3D cameras designated to resume the seabed prospecting in vertical view (face down). The instrument video photo (Box 1) can shoot continuously for long distances and, using special software, it is possible to create photo mosaics and processing 2D and 3D. The project Svi.Str.In. dealt also with technical inspections performed by ISPRA on the Astameter instrument, whose patent is currently in the last phase of the approval by the Italian Patent and Trademark Office, Ministry of Economic Development (Box 2). The Astameter is a multifactorial instrument able to measure, using probes data logger, physical, environmental and hydrological parameters such as sedimentation rate, the growth rate of the mat, the rate of burial of rhizomes, light intensity and water temperature, dissolved oxygen, salinity and conductivity, CO₂. The innovative instruments tested in the ambit of the research project Svi.Str.In. represent an effective for the monitoring of Marine Protected Areas, in the assessment of coastal impacts due to construction of marine works, in the monitoring of the quality and conservation of *Posidonia oceanica* meadows, as well as in the monitoring plans envisaged for the Water Framework Directive and the Marine Strategy Directive.

MULTICAMERA "FACEDOWN" GEOREFERENCED FOR 3D VIDEO PHOTO ACQUISITION

Dive Equipment

Towed Sled (diving)



3D Georeferenced Photomosaic



Box 1



2D / 3D Model Seagrass Mapping

Point Cloud model

Dense Cloud model

Classify Dense Cloud

Solid model

2D Georeferenced Photo Mosaic

MULTIFACTORIAL MONITORING SYSTEM "ASTAMETER"

Box 2



DATA LOGGER PROBE

Temp/Light



Acceleration



Salinity



Dissolved oxygen



Sedimentation trap



Metric bar

