



## CASE STUDY

# Maritime Safety Improved on Major South American River with New Aids to Navigation

*Uruguay, Argentina and Brazil*



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## Project Overview



### Application

Channel Marking in Major South American River



### Product

SL-B1750 Buoys  
SL-75 solar LED 3-5NM Marine Lantern with Bluetooth®  
and GPS Flash Synchronization



### Location

Uruguay River between Brazil, Argentina, and Uruguay



### Date

2017-2018

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“CARU had specific requirements for their new Aids to Navigation. Working through Sealite, Quartz Sistemas was able to provide a solution that helped them increase safety, traffic and commerce on the Uruguay River. Quartz Sistemas is proud to have been a part of this important project.”

– Daniel Alayon, Quartz Sistemas  
Montevideo, Uruguay  
Exclusive Sealite Distributor

### Background

The 1,142-mile long Uruguay River borders three South American countries: Brazil, Argentina, and Uruguay. 32% of the river runs through Brazil, 38% between Argentina and Brazil, and 30% between Argentina and Uruguay, the latter section falling under the maritime administration of the joint Comisión Administradora del Río Uruguay (CARU).

The river is an important driver of economic growth. Regional development is still in its incipient stage.

The river has only been navigable from its mouth to Baysandu in western Uruguay due to the shallow water depths; only smaller vessels could traverse further up the waterway. Increased navigation access and port development was needed to provide economic growth and development in the bordering countries.



## Challenge

Previously, shipping activities were limited to daylight hours because of navigation challenges on the river. Shallow navigation channels and missing, non-working, and damaged navigation aids prevented larger boats from utilizing the full extent of the rivers' navigable water.

CARU took steps to remediate the limitations of marine trade and exports on the river. Dredging operations, undertaken in 2017 and 2018, were one of the first steps to opening up more navigation on the river. The next step was to replace and add navigation aids to help ensure the safety of expanded navigation in the newly accessible areas of the river.

Since CARU has the added responsibility to ensure the ongoing maintenance of water quality in the river, an environmentally friendly marking solution was optimal.

## Solution

CARU ordered replacements for the missing and damaged lighted buoys, and increased the number of total units on the busy river sections. Working with Sealite's regional distributor, Quartz Sistemas of Uruguay, Sealite supplied approximately 139 new AtoNs to support the expanded shipping capacity of the newly dredged sections on the Uruguay River.

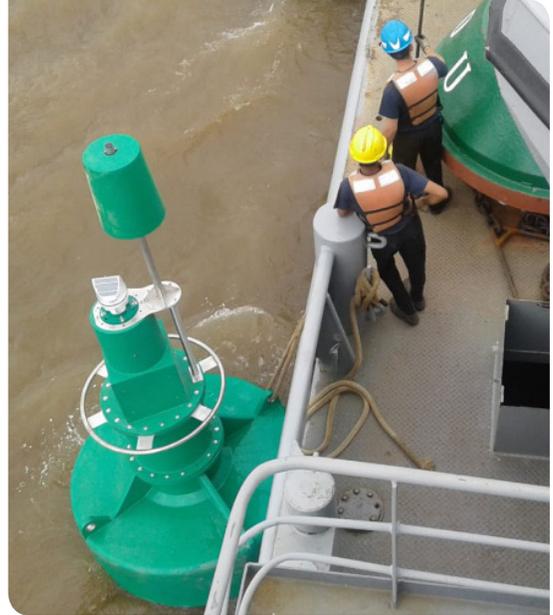
The AtoNs fully met CARU's stringent requirements. The larger focal plane height of Sealite's SL-B1750 Poseidon buoys satisfied CARU's need for excellent visibility from identified geographic locations on the river. Their three piece, modular design allowed them to be easily and economically transported.

CARU requested several critical options to their buoy order. Top marks (to comply to IALA buoyage system guidelines), internal radar reflectors (to increase buoy visibility) and stainless steel grab rails (for safer maintenance and deployment) were all added to further enhance the safety of vessels, mariners and installation personnel.

SL-75 Marine Lanterns accompanied the SL-B1750 Poseidon Buoys, completing the Sealite's AtoN marking solution for CARU. With a high efficiency, single LED, the SL-75 has a range of up to 5NM with a vertical divergence of 7.5 degrees for outstanding visibility. Bluetooth® connectivity allows the lanterns to be remotely programmed and monitored from a distance of up to 50 meters, simplifying and enhancing the safety of installation and maintenance. Angled, high performance solar modules maximize sunlight capture, extend battery life and minimize bird fouling.

Optional GPS flash synchronization was also incorporated into the lanterns which allows each one to flash in unison for enhanced visibility and channel identification.

The new AtoN solution from Sealite has helped facilitate maritime trade, port development and economic development throughout the region.



“This important project will allow the navigation of vessels with larger drafts, increasing cargo possibilities and strengthening the regional and foreign trade.”

– CARU Official





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