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OCTOBER 2017

# sanpedro TODAY



## The New Frontier

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ON BOARD, ALTASEA LOOKS TO TURN  
SAN PEDRO INTO A MAJOR PLAYER  
IN THE 'BLUE ECONOMY'



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WITH DEEP-SEA EXPLORER DR. ROBERT BALLARD ON BOARD, ALTASEA LOOKS TO TURN SAN PEDRO INTO A MAJOR PLAYER IN THE 'BLUE ECONOMY'

by Joshua Stecker

The view from AltaSea's 10th floor executive conference room in downtown San Pedro's Topaz building is a peek into the future.

In the foreground, just across the street, a new 375-unit, seven-story apartment building is currently under construction; one of several new apartment and mixed-use buildings planned for downtown San Pedro in an effort to increase the area's population density. A few blocks away, you can see the Sampson Way realignment project taking place, the first step towards the creation of the highly-anticipated San Pedro Public Market. Even further away, looking past 22nd Street and next to the Cabrillo Marina, the most recent rocket from SpaceX lies waiting to be taken back to its headquarters. And just across the channel from SpaceX sits City Dock 1, the current home and future 35-acre, ocean-based campus of AltaSea.

It's all a work-in-progress now, but this is the future of San Pedro.

For AltaSea, the convergence of all this redevelopment happening at once is good fortune. The attention has placed San Pedro on the map, and business owners and investors are actively examining how it's all going to play out, with AltaSea being a major force in igniting this, theoretical for now, thriving future. According to Jenny Krusoe, executive director of AltaSea, the nonprofit is ready for the challenge.

"We are redeveloping City Dock 1 into a cutting edge 21st century ocean institute, bringing together the best, the brightest, and the boldest minds working in the 'blue economy' sector," explains Krusoe.

The "blue economy" is the concept of using the ocean's resources to provide sustainable agriculture, economic growth, improved livelihoods and jobs, and maintaining a healthy ocean ecosystem. The tenets AltaSea is being built upon.

Krusoe continues, "The boldness and the size of this draws people's attention. We are bringing these minds together, across many disciplines – researchers, educators, and most importantly, new businesses – to create new jobs in the L.A. Harbor."

## THE ULTIMATE WATERCOOLER

To put it simply, AltaSea is one big "think tank" for oceanic research, commerce, agriculture, and education. The concept is simple. Build a facility where different businesses, educators and researchers can work within the same physical space to share talents, resources and data, to generate and continually develop sustainability solutions within the oceanic "blue economy."

"We're putting everyone together on this amazing property with four historic warehouses to create the ultimate watercooler, to have people address what we think are the world's most pressing challenges, food security, energy security, climate security, and exploring the 95 percent of the ocean that is still unexplored," explains Krusoe.

The AltaSea project began in 2007, spearheaded by the late Leonard J. Aube, executive director of the Annenberg Foundation. He was Krusoe's mentor and the inspiration for her to take on the executive director's role in March 2016 after the project's first CEO, Rachel Etherington, departed the year prior. Aube, who started his professional career at Marineland in Rancho Palos Verdes, had the section of 22nd Street, between Signal and Miner Streets that lead into AltaSea, named after him prior to his passing.

Krusoe, who has been with the project since 2011, feels it's her obligation to see her former mentor's dream become a reality.

"When Leonard got sick, he asked me to stay on as deputy director of the project," says Krusoe. "After the leadership change, I took on the role of executive director. Leonard was a brilliant man and this was his dream, and I made him a promise to make this dream a reality."

Up to this year, most of the energy has been focused on fundraising. Recent donors include the Roy & Patricia Disney Family Foundation, The J.M. Kaplan Fund and the Leonetti O'Connell Family Foundation. They join the Port of Los Angeles and the Annenberg Foundation in leading the charge towards successfully

funding the project. (AltaSea also accepts private donations through their website, [altasea.org](http://altasea.org).)

Among the five people that make up AltaSea's current board of trustees, two are notable San Pedrans: Camilla Townsend, former Harbor Commissioner and former CEO of the San Pedro Peninsula Chamber of Commerce, and Doane Liu, executive director of the Los Angeles Department of Convention and Tourism Development.

In August, AltaSea revised the original costs for building out Phase I, which includes restoring and renovating Warehouses 57-60 and the build out of an Engagement Center. Originally slated to cost \$300 million, the current estimate is now \$135 million. The cost for renovating the warehouses dropped from \$130 million to \$15 million, with the Port of L.A.'s remediation costs reduced from \$146 million to just \$6 million. AltaSea also restated their lease with the Port of Los Angeles, who owns the land. The 50-year lease now lasts through 2063.

"Full permits should be awarded in October," explains Krusoe. "Our plan is to get the shovel in the ground before the end of the year."

Currently, AltaSea is the home of Catalina Sea Ranch, an aquaculture farming company, and is the west coast base for world-famous deep-sea explorer, Dr. Robert Ballard, who you may know as the man who famously discovered the wreckage of the RMS *Titanic*. In addition, 22 universities have signed on with the project, with the goal of inspiring students to consider a career in oceanic exploration and research.

The local Boys & Girls Clubs of the L.A. Harbor also has an office within AltaSea, with the goal of creating a pipeline to inspire middle school kids to be involved in oceanic science and research so they can acquire these new jobs soon to be available in the future.

#### A BIG CATCH

In September 2016, AltaSea announced a partnership with Dr. Robert Ballard, bringing his Ocean Exploration Trust and *Nautilus* Exploration Program to San Pedro.

"The Ocean Exploration Trust's mission is to engage in pure ocean exploration. Berthing *Nautilus* in San Pedro enables us to work with AltaSea to advance the vital cause of educating learners of all ages in science, technology, math and engineering," Dr. Ballard said in a statement.

In July, Dr. Ballard, who turned 75 this year, led the media on a tour of Exploration Vehicle *Nautilus*, and explained the importance of AltaSea and what it means, not only to San Pedro, but to the entire planet.

"I'm a kid from Southern California who wanted to be Captain Nemo. I think I pulled it off," says Ballard. "This is home. I want to share what I'm doing with my home. That's why I partnered

with AltaSea. You can see San Pedro is on the move. It's going to pop. Here, you have an amazing tie to the ocean."

With 95 percent of the ocean still unexplored, the chance of finding new materials, such as metals, plant and sea life, that could be used for new medicines and scientific research, is high and worth the time and effort folks like Dr. Ballard are putting into it.

"Once AltaSea grows to critical mass, it can showcase its findings with the world," he says. "Why try to colonize Mars when you can still colonize Earth? The future isn't about sustaining life in the sea, it's about vastly increasing the productivity of the oceans. The oceans can produce much more food than it's producing right now."

Currently, Dr. Ballard and his team aboard E/V *Nautilus* are sonar mapping the ocean floor near the Channel Islands. You can follow *Nautilus'* explorations live online at [NautilusLive.org](http://NautilusLive.org).

#### UNDERWATER FARMING

The most active tenant currently at AltaSea is Catalina Sea Ranch, an aquaculture farming company led by founder and CEO, Phil Cruver.

The company, which is the first offshore aquaculture facility to be granted a federal permit to operate in U.S. waters, currently manages a 100-acre sea ranch six-miles off the Southern California coast, with plans to expand to 1,000 acres. Their current crops include Mediterranean Mussel, Giant kelp, Giant Rock Scallop, Pacific Oysters, macro algae and abalone.

According to Cruver, the Southern California waters are the perfect place to cultivate sustainable food from the ocean.

"The San Pedro shelf is the largest underwater platform on the west coast," explains Cruver. "It's perfect for offshore agriculture, especially for shellfish. There's not a place like it on the west coast. We currently have 100 acres and we're starting off with mussels. We get a new crop every 8-10 months."

Cruver and his team operate in Berth 58, utilizing seven shipping containers-turned-offices. A research hatchery filled with innovative mussel operations and other aquaculture crops occupy one side of the warehouse, while the other side is used for scientific testing and research purposes.

"[The United States has] a \$14 billion seafood deficit," claims Cruver. "We import over 90% of our seafood. It's the second largest deficit after oil. With all this shoreline, we should be a net exporter, not an importer."

"We want to make San Pedro the capital of aquafarming for the 21st century," says Krusoe.

In addition to its aquaculture business, and as part of their deal with AltaSea, Catalina Sea Ranch offers an educational element, allowing students to learn about aquaculture and its impact on the environment and to the



Blue Robotics, Inc. founder, Rusty Jehangir, with the BlueROV2 (top); Dr. Robert Ballard aboard E/V *Nautilus* (center); E/V *Nautilus* docked at AltaSea. (photos: Joshua Stecker, John Mattera)



food economy. In return, AltaSea provides rent credits to business partners who provide educational opportunities for children in the community.

#### ROBOTS IN THE WATER

A major facet to the “blue economy” is “blue technology,” or as Krusoe describes it, “robots in the water.” A new innovator in this field is Blue Robotics, Inc. ([bluerobotics.com](http://bluerobotics.com)), a Torrance-based company founded by engineer, Rusty Jehangir.

“We’re starting AltaSea with sustainable agriculture and blue technology, because every predictor says this is where a massive amount of new job generation is going to happen,” says Krusoe.

What started out as a fun side project – build a small, solar-powered boat, guided by GPS, and have it travel autonomously from Los Angeles to Hawaii – has turned into a full-time business.

“In the process for searching for better thrusters, we found that we weren’t alone,” explains Jehangir, a 29-year-old who holds a bachelor’s degree in Mechanical Engineering and a master’s degree in Aerospace Engineering from USC. “So, we decided to design a better and cheaper thruster. We developed a prototype and a

patentable idea.”

Their first product, the T100 Thruster, raised more than \$100,000 through a Kickstarter campaign.

“Our goal is to create a low cost and high quality product for marine robotics that’s available to anyone, from Dr. Ballard to a kid just wanting to explore the ocean,” he says.

While not a full-fledged tenant of AltaSea yet, Jehangir is a firm believer in the project’s mission and looks forward to being a partner alongside Cruver and Ballard.

“AltaSea sounded too good to be true for a marine robotics business like ours,” he says. “The most exciting part about it is having access to the water and access to a community of other companies and experts, centralized around marine research, that can help each other.”

That’s what AltaSea’s mission is about, and Krusoe is confident that by 2020, San Pedro will have a full-fledged, state-of-the-art ocean institute to call its own.

“San Pedro has a very adventurous spirit,” says Krusoe, who currently calls the port town home. “It fits to have all these people here at AltaSea. This project is transformative, and San Pedro deserves it.” [spt](http://spt)

For more information on AltaSea, visit [altasea.org](http://altasea.org).



Phil Cruver, founder and CEO of Catalina Sea Ranch (top); mussels grow in a research hatchery at AltaSea. (photos: John Mattera)



“ This project is transformative...”