

THE ART AND SCIENCE OF WATER

SUPPORTING MARINE SCIENCE, ENVIRONMENTAL RESTORATION & AQUATIC RESEARCH ENVIRONMENTS



OCEANIS
INTERNATIONAL
THE ART AND SCIENCE OF WATER

CONSULTING SERVICES FOR MARINE RESEARCH, AQUACULTURE & SPECIALISED AQUATIC INFRASTRUCTURE

MARINE RESEARCH · SEAWATER INFRASTRUCTURE · CONTROLLED ENVIRONMENT LABORATORIES · MARINE
ENVIRONMENTAL RESTORATION · AQUACULTURE SYSTEMS · LIFE SUPPORT SYSTEMS



ABOUT OCEANIS INTERNATIONAL

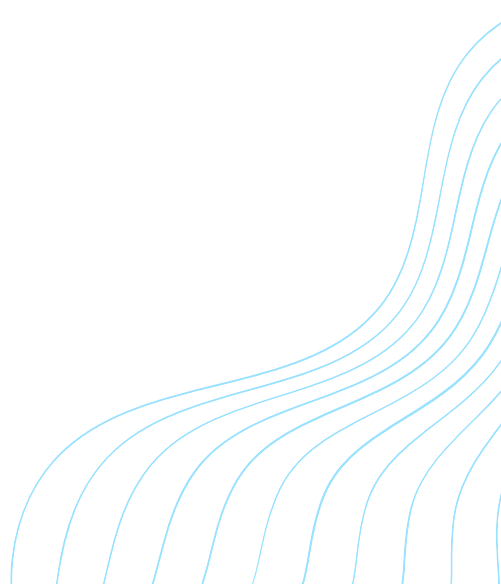
For over 25 years, Oceanis has been ‘creating with water’ for communities, entertainment, and science. We combine the arts and disciplines of architecture, engineering, and business to design and build facilities around the world for people: to work and play.

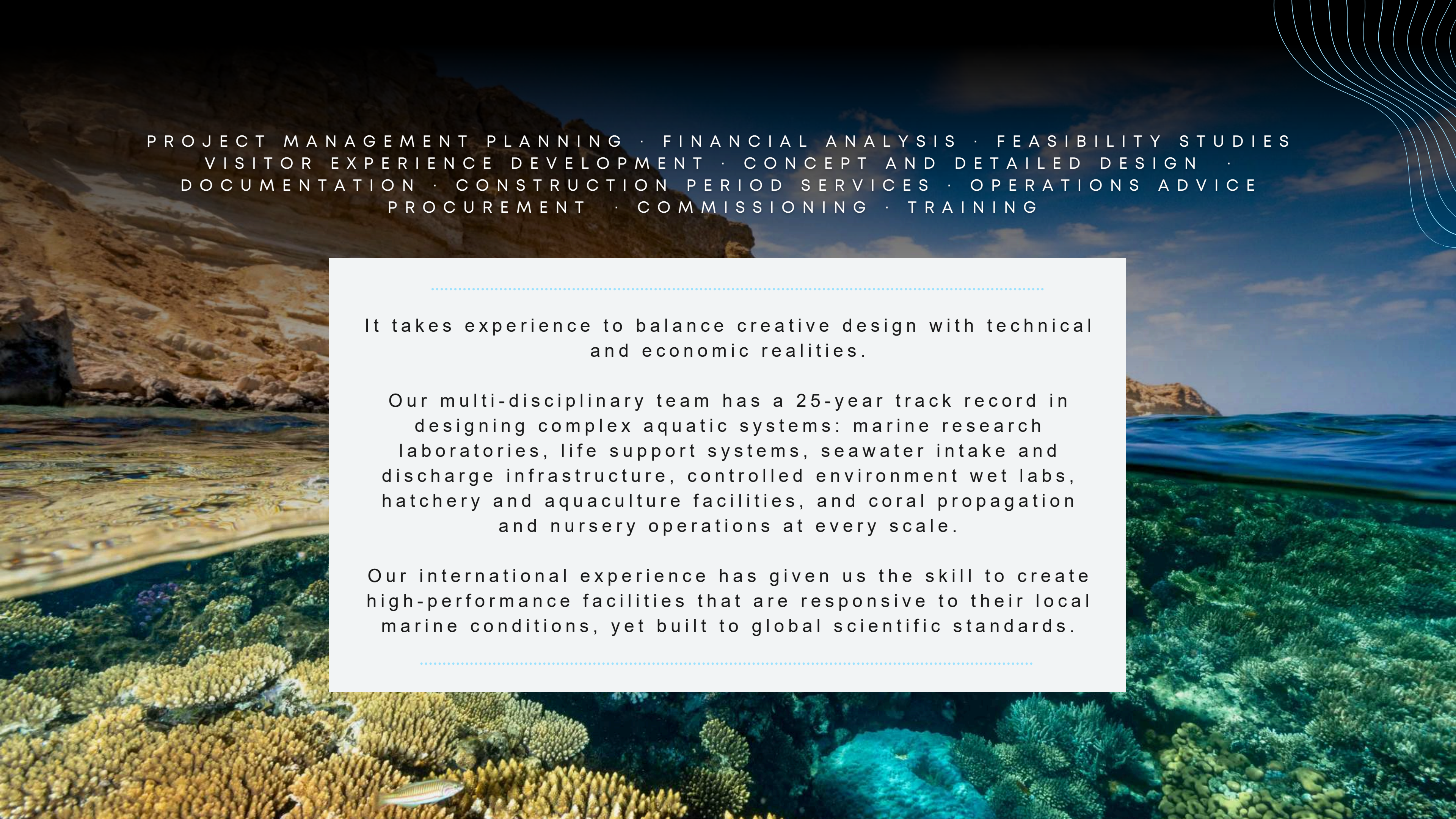
Marine research laboratories, coral nursery facilities and coral restoration, aquariums, aquaculture, entertainment precincts and zoos — we help our clients create and develop aquatic and marine facilities that are inspiring, responsible, and sustainable to operate.

It takes a deep set of multi-disciplinary skills, across a broad set of design and operational aspects for successful marine and aquatic projects.

Oceanis blends creative and technical know-how, working closely with our clients to help create exceptional facilities.

It's the art and science of water.





PROJECT MANAGEMENT PLANNING · FINANCIAL ANALYSIS · FEASIBILITY STUDIES
VISITOR EXPERIENCE DEVELOPMENT · CONCEPT AND DETAILED DESIGN ·
DOCUMENTATION · CONSTRUCTION PERIOD SERVICES · OPERATIONS ADVICE
PROCUREMENT · COMMISSIONING · TRAINING

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It takes experience to balance creative design with technical
and economic realities.

Our multi-disciplinary team has a 25-year track record in
designing complex aquatic systems: marine research
laboratories, life support systems, seawater intake and
discharge infrastructure, controlled environment wet labs,
hatchery and aquaculture facilities, and coral propagation
and nursery operations at every scale.

Our international experience has given us the skill to create
high-performance facilities that are responsive to their local
marine conditions, yet built to global scientific standards.

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A photograph of an older man with white hair, wearing a blue button-down shirt, leaning over a large, rectangular, illuminated tank containing coral. The tank is part of a larger laboratory setup with yellow structural beams and other tanks in the background. The lighting is a mix of blue and purple, typical of coral reef aquariums.

AUSTRALIAN INSTITUTE OF MARINE SCIENCE (AIMS) SEASIM LABORATORY TOWNSVILLE, QUEENSLAND

PROJECT HIGHLIGHT

Oceanis has supported the Australian Institute of Marine Science (AIMS) for more than 15 years across specialised marine research infrastructure, seawater systems, and controlled aquatic research environments supporting coral science, reef rehabilitation, and long-term marine research programmes.

The internationally recognised National Sea Simulator (SeaSim) was developed to provide researchers with highly controlled environmental conditions capable of supporting complex marine and coral science investigations and restoration projects at operational scale.

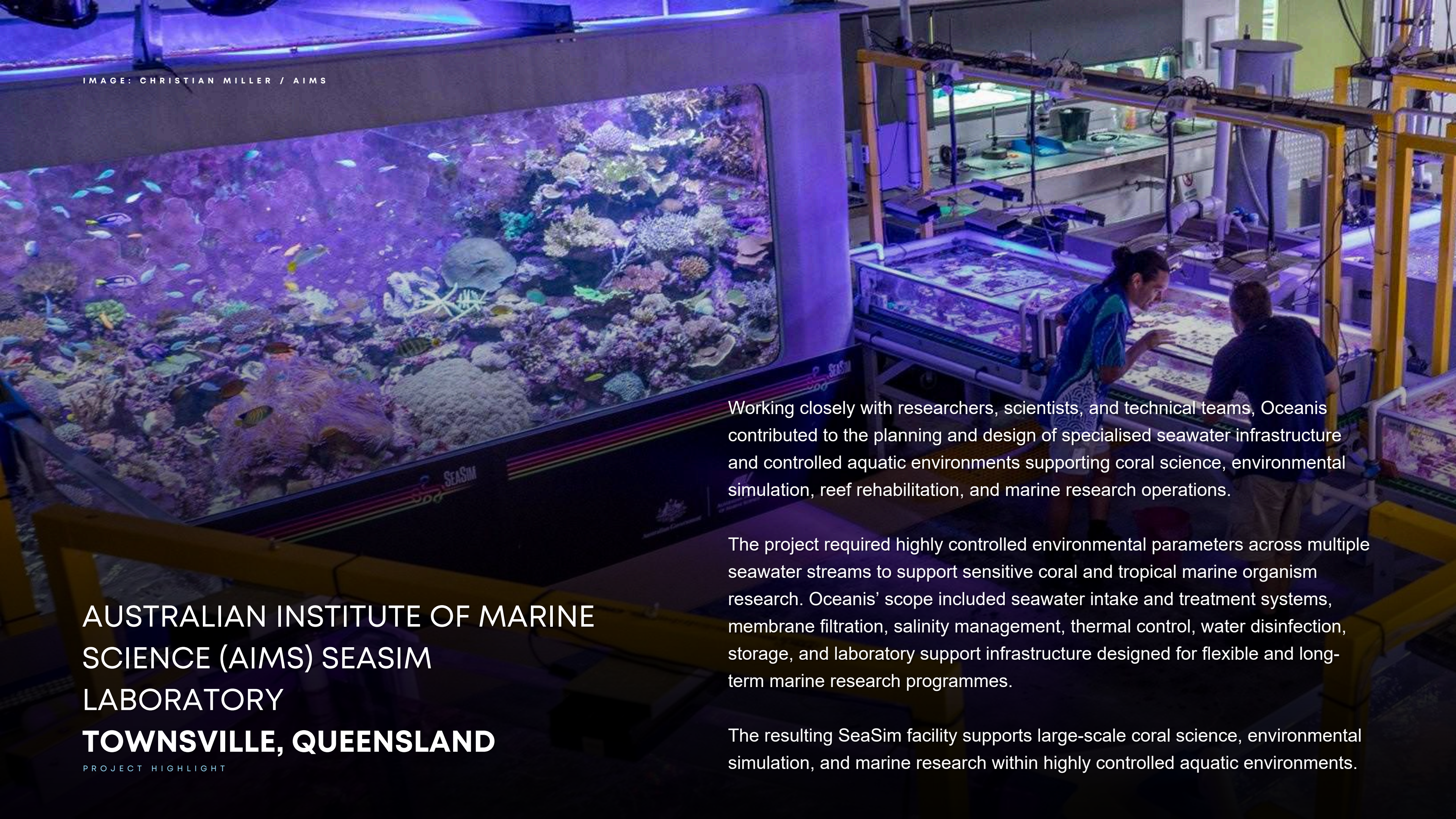


IMAGE: CHRISTIAN MILLER / AIMS

AUSTRALIAN INSTITUTE OF MARINE SCIENCE (AIMS) SEASIM LABORATORY **TOWNSVILLE, QUEENSLAND**

PROJECT HIGHLIGHT

Working closely with researchers, scientists, and technical teams, Oceanis contributed to the planning and design of specialised seawater infrastructure and controlled aquatic environments supporting coral science, environmental simulation, reef rehabilitation, and marine research operations.

The project required highly controlled environmental parameters across multiple seawater streams to support sensitive coral and tropical marine organism research. Oceanis' scope included seawater intake and treatment systems, membrane filtration, salinity management, thermal control, water disinfection, storage, and laboratory support infrastructure designed for flexible and long-term marine research programmes.

The resulting SeaSim facility supports large-scale coral science, environmental simulation, and marine research within highly controlled aquatic environments.



IMAGE: AIMS

AUSTRALIAN INSTITUTE OF MARINE SCIENCE (AIMS) SEASIM LABORATORY

READ THE FULL PROJECT OVERVIEW AT [OCEANIS.COM.AU](https://oceanis.com.au) ➔



KAUST COASTAL MARINE RESOURCES LABORATORY SAUDI ARABIA

PROJECT HIGHLIGHT

Oceanis has completed design for an extensive remediation of end-to-end life support systems, associated controls systems and infrastructure of the laboratories to allow the University to continue to provide state of the art research capabilities for its scientists.

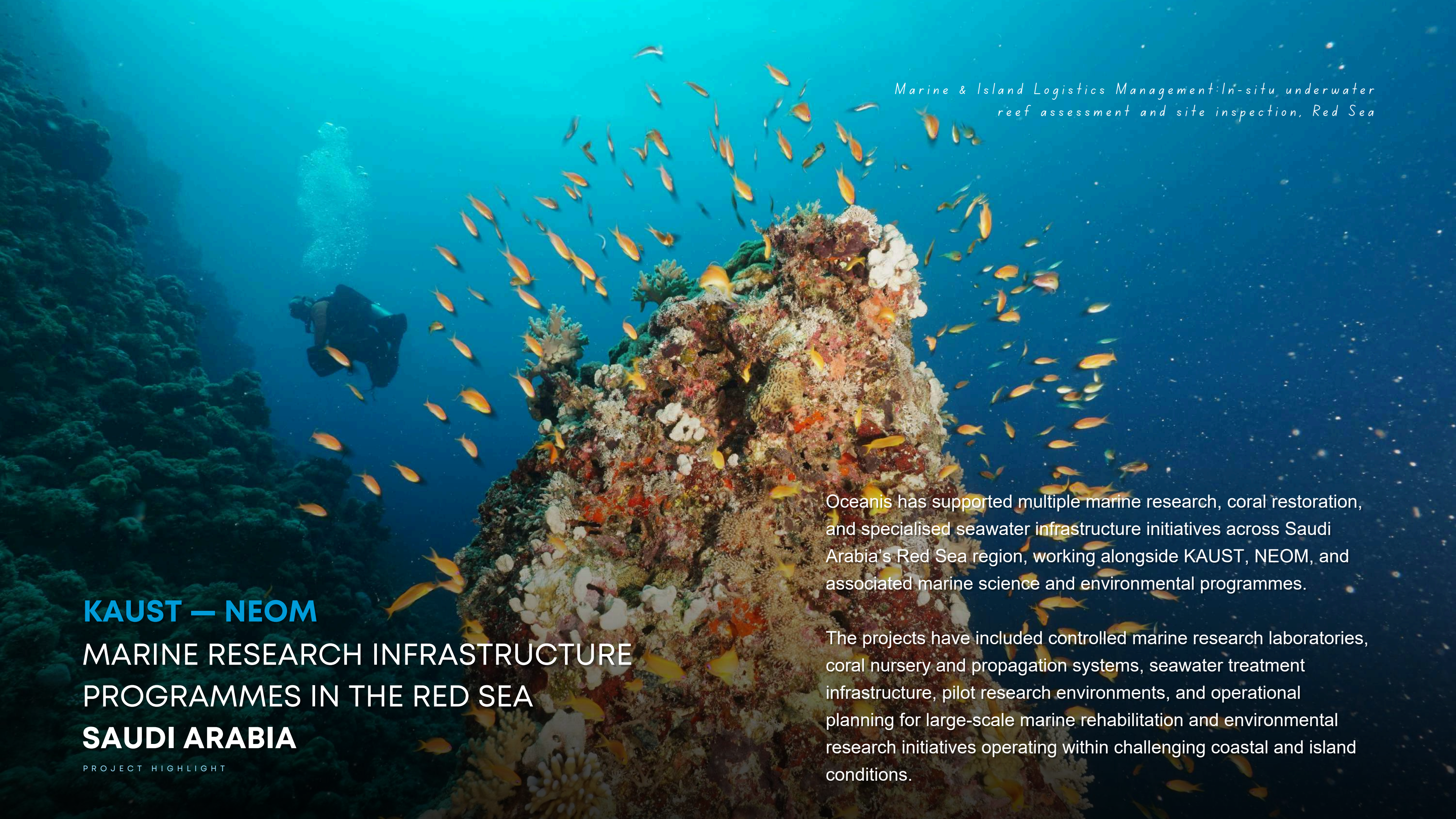
The updated facilities have been designed to support climate change research on Red Sea marine life as well as further enhance animal welfare within the facility. Oceanis has provided construction management services for the first stage of the project, now completed and working successfully. We are now providing construction management for the second stage.



KAUST CMR LABORATORY SAUDI ARABIA



Construction of the CMR upgrades is well underway, with Oceanis continuing to provide support to KAUST during this phase. Most recently Oceanis has undertaken Factory Acceptance Testing of the state-of-the-art membrane filtration technology that is to be deployed as part of the CMR upgrades. This exceptional technology is set to provide KAUST marine researchers with even more enhanced facilities, furthering their Red Sea marine research in support of the Saudi government's conservation and blue economy initiatives.

A full-page underwater photograph of a coral reef in the Red Sea. A diver is visible on the left, swimming towards a large, vertical coral structure. The water is clear blue, and many small orange fish are swimming around the coral.

Marine & Island Logistics Management: In-situ underwater reef assessment and site inspection, Red Sea

KAUST — NEOM
MARINE RESEARCH INFRASTRUCTURE
PROGRAMMES IN THE RED SEA
SAUDI ARABIA

PROJECT HIGHLIGHT

Oceanis has supported multiple marine research, coral restoration, and specialised seawater infrastructure initiatives across Saudi Arabia's Red Sea region, working alongside KAUST, NEOM, and associated marine science and environmental programmes.

The projects have included controlled marine research laboratories, coral nursery and propagation systems, seawater treatment infrastructure, pilot research environments, and operational planning for large-scale marine rehabilitation and environmental research initiatives operating within challenging coastal and island conditions.

PROJECT HIGHLIGHT

KAUST/NEOM CORAL RESTORATION INITIATIVE AT SHUSHAH ISLAND — RESEARCH STATION **SAUDI ARABIA**

Working from early brief development through detailed design development, Oceanis contributed to the planning of specialised coral nursery and scientific aquaria facilities being developed to support restoration of over 100 hectares of coral reefscape and marine research initiatives at Shushah Island in the Red Sea. The project integrates laboratories, coral holding and propagation systems, water quality facilities, and technical support spaces within a wider tourism environment designed to encourage visitor engagement with coral conservation and restoration activities.

Alongside specialist aquatic systems design, Oceanis also provided strategic input into the integration of marine research within the broader tourism and destination-planning framework, balancing operational performance, visitor experience, environmental responsibility, and long-term conservation outcomes. The project, set to become a core part of KAUST's Core Lab ecosystem, is currently under construction.



PROJECT HIGHLIGHT

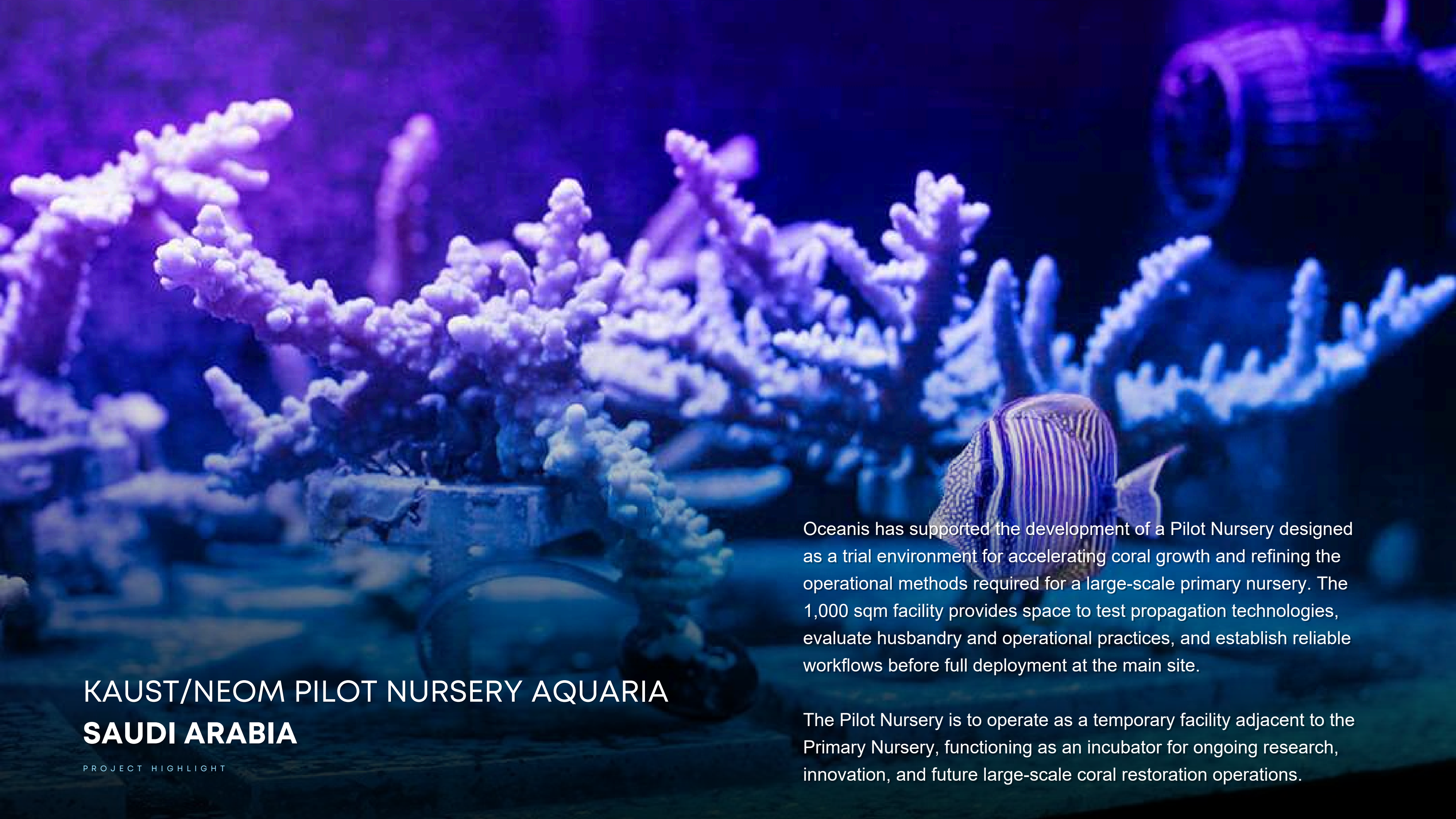
KAUST/NEOM CORAL REEFSCAPE NURSERY SAUDI ARABIA

Oceanis led a comprehensive design brief process for what will become the world's largest coral nursery at Haddah Beach, supporting the KAUST-NEOM Coral Restoration Initiative.

The challenging design brief process involved bringing together the diverse needs of marine researchers, world-wide coral husbandry experts, operations teams, NEOM architecture and corporate objectives, married with KAUST facilities management teams. From the successful briefing process the design for the Reefscape nursery was developed and is now under construction

The facility is planned to cultivate and out-plant up to 400,000 corals each year, integrating advanced aquaculture and propagation techniques to support large-scale reef rehabilitation. The design also incorporates spaces for visitor interpretation and education, showcasing the ongoing coral restoration work led by KAUST.





KAUST/NEOM PILOT NURSERY AQUARIA **SAUDI ARABIA**

PROJECT HIGHLIGHT

Oceanis has supported the development of a Pilot Nursery designed as a trial environment for accelerating coral growth and refining the operational methods required for a large-scale primary nursery. The 1,000 sqm facility provides space to test propagation technologies, evaluate husbandry and operational practices, and establish reliable workflows before full deployment at the main site.

The Pilot Nursery is to operate as a temporary facility adjacent to the Primary Nursery, functioning as an incubator for ongoing research, innovation, and future large-scale coral restoration operations.

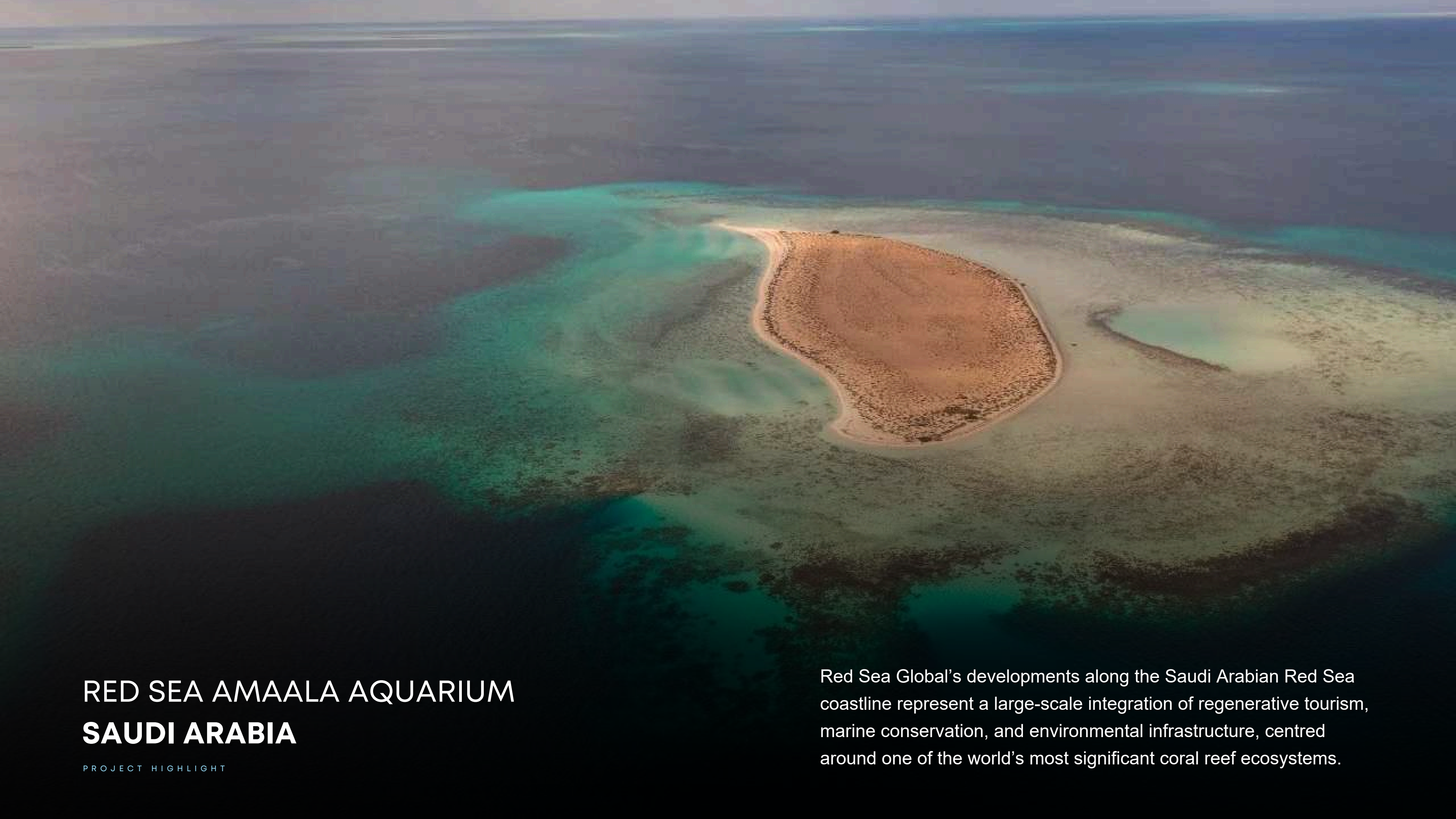


INDIAN OCEAN MARINE RESEARCH CENTRE WESTERN AUSTRALIA

PROJECT HIGHLIGHT

The IOMRC is a collaborative project between the Oceans Institute of the University of Western Australia, CSIRO, Western Australia Fisheries Department and the Australian Institute of Marine Science. This project was the refurbishment of the Institute's ocean-side marine research laboratory at Watermans Bay.

Oceanis conducted initial brief development, budget development and concept design of seawater intake and treatment facilities.



RED SEA AMAALA AQUARIUM **SAUDI ARABIA**

PROJECT HIGHLIGHT

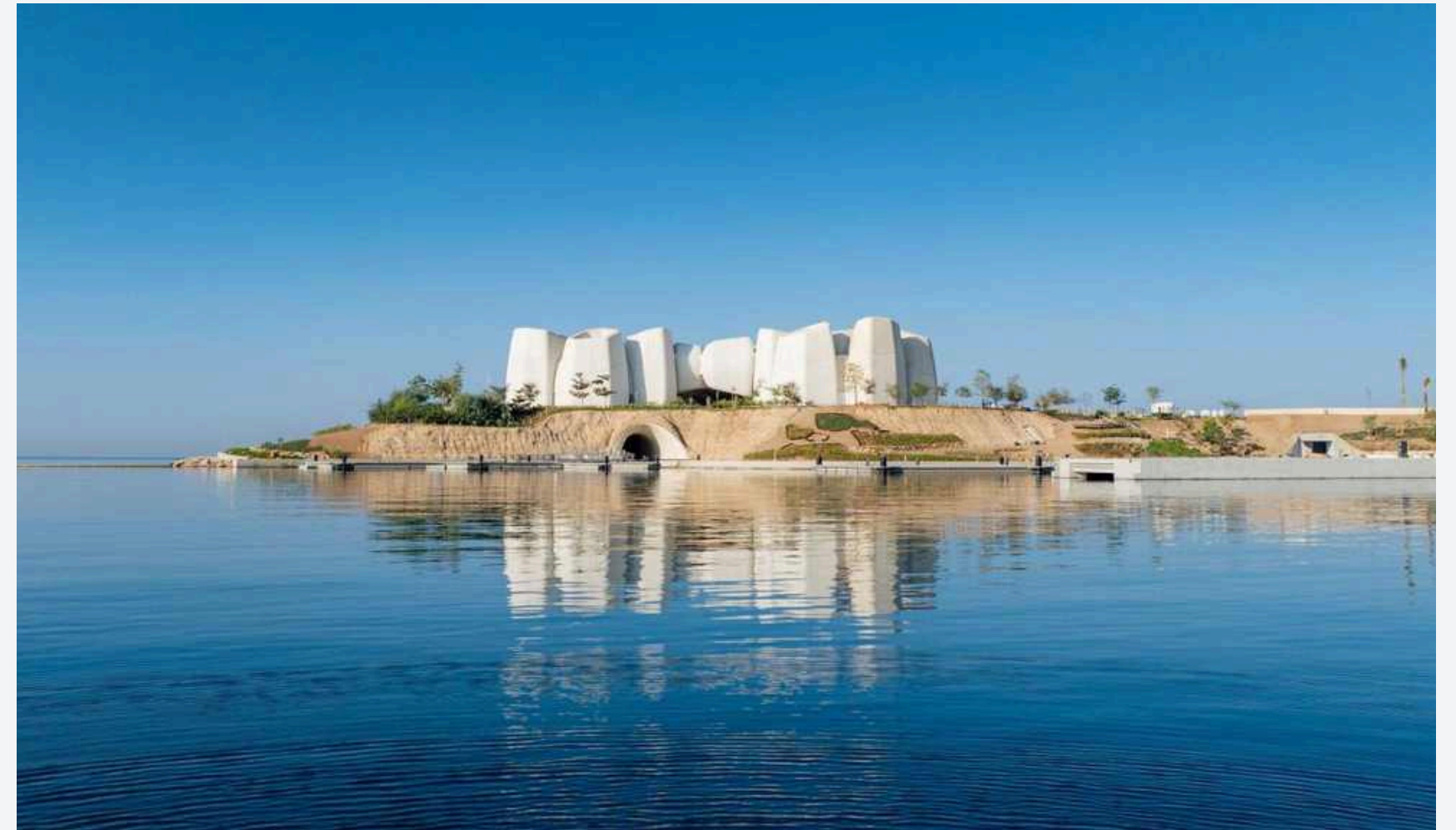
Red Sea Global's developments along the Saudi Arabian Red Sea coastline represent a large-scale integration of regenerative tourism, marine conservation, and environmental infrastructure, centred around one of the world's most significant coral reef ecosystems.

PROJECT HIGHLIGHT

RED SEA AMAALA AQUARIUM SAUDI ARABIA

Oceanis worked alongside Red Sea Global during the operational development phase of several marine-focused initiatives, supporting the delivery of marine life, coral regeneration, and aquatic tourism facilities aligned with the project's broader environmental and visitor objectives. The engagement included operational readiness planning, organisational and staffing strategy, recruitment processes, biosecurity planning, operational financial modelling, and guest-experience development for marine and aquatic environments.

The project reflects Oceanis' broader capability in supporting complex marine and research-driven facilities where conservation, tourism, education, and operational performance must operate together within environmentally sensitive coastal developments.





MINDEROO EXMOUTH RESEARCH LABORATORY **WESTERN AUSTRALIA**

PROJECT HIGHLIGHT

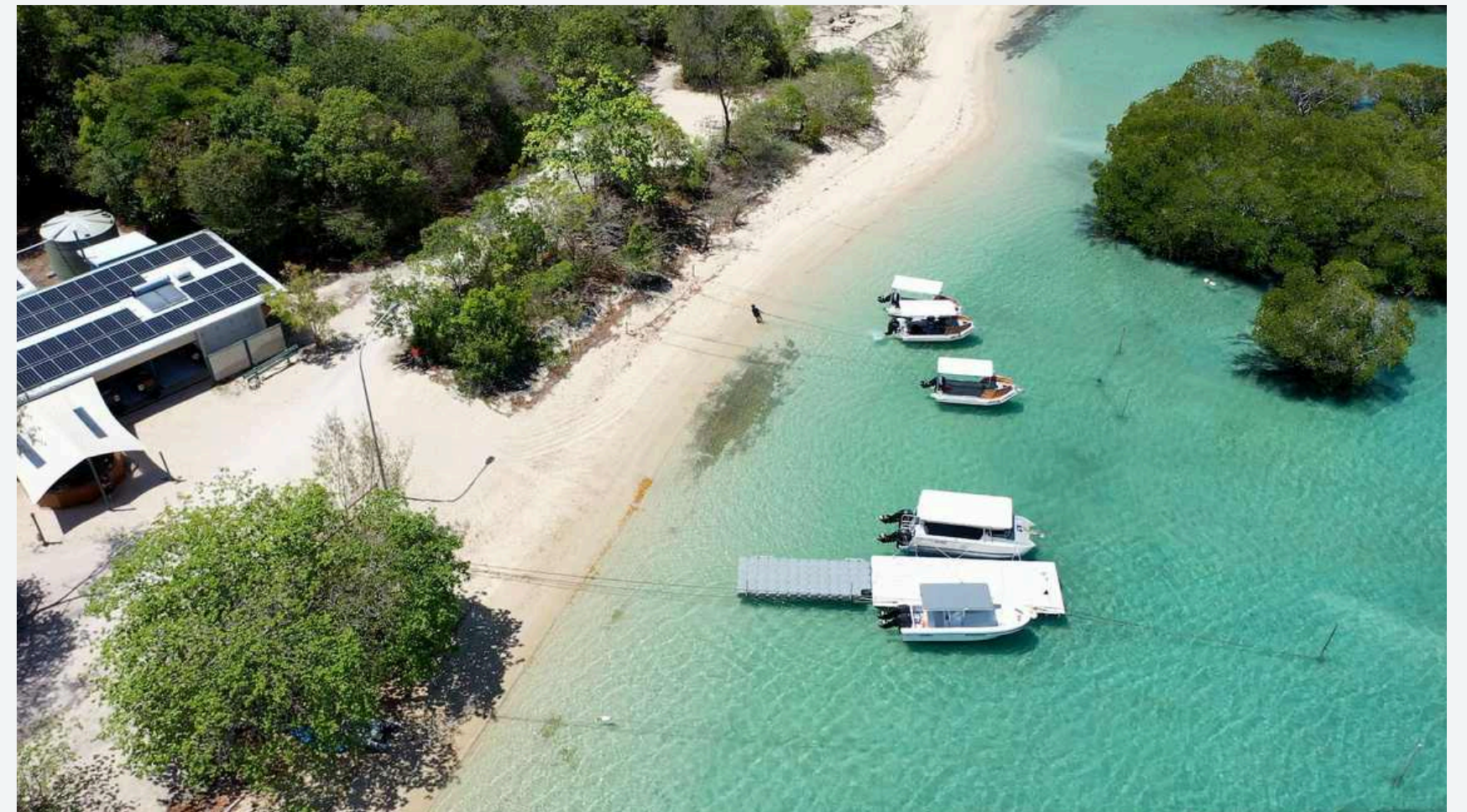
Oceanis contributed to the planning and implementation of the research laboratory facilities and seawater systems for the new Minderoo Exmouth Research Laboratory — helping ensure that the infrastructure meets the specific requirements for marine research, including the development of seawater systems designed to support various scientific studies.

PROJECT HIGHLIGHT

ORPHEUS ISLAND MARINE RESEARCH STATION QUEENSLAND, AUSTRALIA

Oceanis provided lead consultancy role in designing upgrades to the marine research station off the coast of Queensland, Australia.

Amongst the significant initiatives are new seawater intake, storage and discharge facilities – a not insignificant management task within the Great Barrier Reef Marine Park.





OCEANIS' AQUACULTURE CONSULTANCY CAPABILITIES

AQUATIC DESIGN SPECIALISTS FOR MARINE RESEARCH,
CULTIVATION, AND ENVIRONMENTALLY INTEGRATED
FACILITIES.

Oceanis supports the planning and design of aquaculture environments that integrate marine biology understanding, aquatic engineering, operational practicality, and environmental performance.

Drawing on experience across aquaria, marine research facilities, seawater infrastructure, coral nurseries, and life support systems, Oceanis works on projects ranging from land-based cultivation and holding environments to tourism and education-integrated marine facilities. Working internationally across varied climates and marine conditions, the team develops tailored solutions that balance water quality, animal welfare, operational efficiency, visitor engagement, and long-term sustainability objectives within each project's unique environmental and commercial context.



JAMES COOK UNIVERSITY – TROPICAL AQUACULTURE ACCELERATOR (TA2) QUEENSLAND, AUSTRALIA

PROJECT HIGHLIGHT

As specialty Aquaculture, Research and Marine Facilities Lead Consultant, Oceanis led the TA2 design for a modern ‘wet’ education and R&D facility for James Cook University.

The design comprises a series of wet-controlled environment laboratories designed to be modular and flexible technology-enabled aquatic experimental spaces (“aquasheds”), and state-of-the-art central services backbone. The backbone offers a centrally managed range of seawater qualities, gases, and power, with sophisticated environment monitoring and extensive ICT backbone infrastructure. The central services are supported by finely controllable individual, modular life support systems with advanced controls for managing aquaculture-specific experiments in each laboratory.



ALGAE BIOTECHNOLOGY AQUACULTURE FACILITY **SAUDI ARABIA**

PROJECT HIGHLIGHT

Oceanis worked closely with our client to design the key hydraulic performance elements and seawater management systems of this groundbreaking aquaculture facility located in Saudi Arabia. The facility is combined with a finfish aquaculture facility providing the nutrient source for algae growth.

AQUACULTURE & SEAWATER MANAGEMENT SOLUTIONS WORLDWIDE EXAMPLES

Oceanis has designed, investigated, and modified major seawater intake, discharge, and artificial seawater systems for a wide range of projects:



- Australian Tropical Marine Aquaculture Facility (ATMAC), Townsville Port, Australia
- Western Australian Fisheries Laboratory, Australia
- Rockhampton State High School Aquaculture Systems, Queensland, Australia
- Bioreactor Aquaculture Research Plant, Western Australia
- Orpheus Island Research Station, Queensland
- Jakarta Aquarium, Indonesia
- Melbourne Zoo
- AIMS Expansion Program
- KCRI/NEOM Coral Nursery

- Tiger Beach Marine Park, China
- Chennai Aquarium, India
- Beijing Aquarium, China
- James Cook University, Queensland
- Western Australian Fisheries Department Laboratory Review, Perth
- Melbourne Aquarium, Australia
- Hainan Island, China
- Shushah Island Marine Research Centre
- KAUST Algae Biotechnology Centre
- CSIRO Darwin Facilities
- Ocean Park, Hong Kong
- Singapore Zoo

- Ningaloo Reef Aquarium and Research Centre Australia
- Haddah Beach Pilot Nursery, Saudi Arabia
- Mumbai Zoo Marine Exhibits, India
- Taronga Marine Exhibits, Sydney Australia
- AIMS Seawater Systems Resiliency Project, Queensland
- KAUST Coastal Marine Resources Laboratories, Saudi Arabia
- Aquaculture Research Biosecurity Facility, Confidential
- Macquarie SeaWater Lab, Australia
- Taronga Zoo, Sydney Australia
- Beijing Pacific Exhibition Aquarium, China
- University of Western Australia Coastal Marine Laboratory, Australia

PROJECTS GALLERY



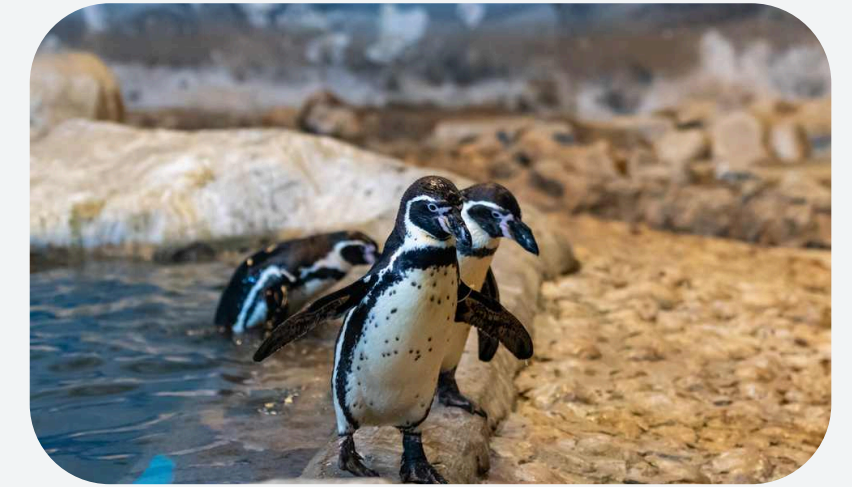
**UNIVERSITY OF WESTERN AUSTRALIA
COASTAL MARINE LABORATORY**
AUSTRALIA



MACQUARIE SEAWATER LAB
AUSTRALIA



**AQUACULTURE RESEARCH
BIOSECURITY FACILITY**
CONFIDENTIAL



**SINGAPORE ZOO – MARINE &
COASTAL HABITAT**
SINGAPORE



TARONGA ZOO
SYDNEY AUSTRALIA



COLLTECH RESEARCH FACILITY
AUSTRALIA



**WATERFRONT URBAN
PARK BIOSPHERE**
MACAU

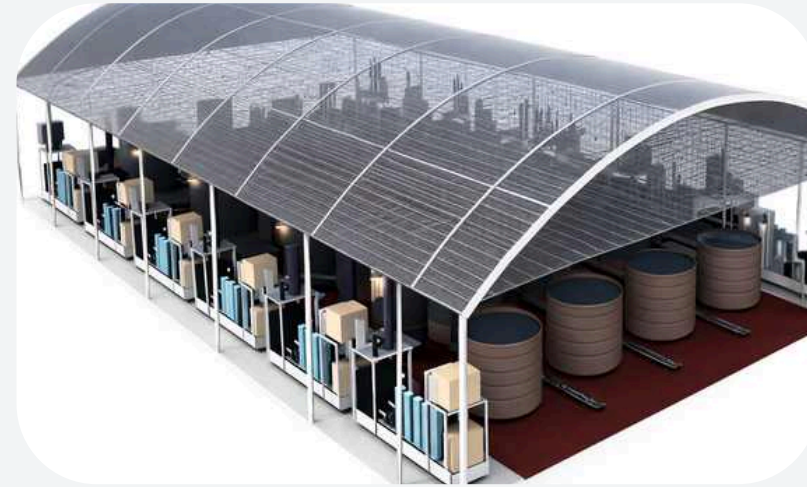


**AUSTRALIAN TROPICAL MARINE
AQUACULTURE FACILITY (ATMAC)**
TOWNSVILLE PORT, AUSTRALIA

PROJECTS GALLERY



**BUSSETON JETTY
UNDERWATER OBSERVATORY**
AUSTRALIA



**JCU MARINE AND AQUACULTURE
RESEARCH FACILITY (MARF)**
TOWNSVILLE, AUSTRALIA



BALI SAFARI PARK
INDONESIA



**ROCKHAMPTON AQUACULTURE
PRECINCT**
QUEENSLAND, AUSTRALIA



LOTTE WORLD TOWER AQUARIUM
KOREA



**EMAMA NGUDA ABORIGINAL CORP
CHERABIN INFRASTRUCTURE
ANALYSIS**
AUSTRALIA



CORAL REEF MARINE PARK
MIDDLE EAST



**NATURAL FUELS ALGAE
RESEARCH PLANT**
AUSTRALIA

PROJECTS GALLERY



WATERFRONT URBAN PARK
MACAU



MELBOURNE AQUARIUM
AUSTRALIA



**RED SEA UNDERWATER
OBSERVATORY & MARINE PARK**
SAUDI ARABIA



**TARONGA ZOO – ASIAN
RAINFORST PRECINCT**
SYDNEY, AUSTRALIA



**BEIJING PACIFIC EXHIBITION
AQUARIUM**
CHINA



**NATURALISTE MARINE
DISCOVERY CENTRE**
PERTH, WESTERN AUSTRALIA



DUBAI MALL AQUARIUM
UNITED ARAB EMIRATES



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