SDG 14 Life Below Water

ITS SDG Report 2025



ITS contributes to SDG 14 through marine research, maritime innovation, education, and community-based conservation. In 2025, its initiatives ranged from deep-sea exploration in northern Sulawesi and artificial-reef development for coastal protection to autonomous marine technology and collaboration among 25 universities to strengthen maritime higher education. Through industry partnerships with DNV and ASDP Indonesia Ferry, ITS also supports maritime research and the development of more sustainable shipping practices. Beyond research and institutional collaboration, coastal clean-ups, mangrove planting, turtle conservation, and zero-waste fisheries training translate marine sustainability into practical action. Together, these efforts connect scientific innovation and education with ecosystem protection and community engagement, supporting the sustainable use and conservation of marine and coastal resources.

204
publications

1.05
field-weighted citation impact

16
output in top 10% journals

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Research

Through OceanX–BRIN, two ITS lecturers worked on deep-sea research expedition in northern Sulawesi, contributing to water-column mapping for potential hydrothermal vents and seafloor geological investigations. ITS also advanced nature-based coastal protection through Hexareef, an artificial-reef structure designed to reduce coastal abrasion while supporting coral recovery, with applications explored in Tlangoh, Bangkalan, and Raja Ampat. In marine technology, Barunastra research team collaborated with BRIN's Hydrodynamics Laboratory to test its Nala Ares Autonomous Surface Vehicle ahead of the International RoboBoat Competition 2025, strengthening capabilities in autonomous marine systems.

Teaching

Strengthening maritime education requires collaboration across higher education institutions, practical training, and learning experience in real-world challenges. In November 2025, ITS initiated the Indonesian Maritime Higher Education Forum, bringing 25 universities to promote curriculum harmonisation, mobility programs, and collaborative research. Complementing the effort, Sustainable Blue Economy Center (SBEC) advances sustainability-oriented learning through the SustainaBlue program, including the introduction of a Sustainable Fisheries course which connects academic learning with responsible fisheries management and waste reduction.

Stewardship

ITS' sustainability framework addresses biodiversity protection, ecosystem conservation, and the rehabilitation and restoration of natural environments. Partnerships with maritime industry stakeholders further connect academic expertise with practical applications. Collaboration with DNV supports maritime education, research, and technical training, while cooperation with ASDP Indonesia Ferry covers maritime research, ship design, technical consultation, and potential green-shipping initiatives.

Outreach

Community engagement remains important for translating marine sustainability knowledge into action. In June 2025, World Ocean Day and Coral Triangle Day activities at Romokalisari Adventure Land, Surabaya, brought together volunteers and cross-sector partners for coastal clean-up and planting activities to reduce marine litter and support coastal vegetation restoration. At Taman Kili-Kili Trenggalek, turtle conservation activities combined educational materials, geospatial mapping, and community training with local conservation groups and government agencies. In Blitar, SBEC ITS trained fisheries communities in zero-waste practices through converting fish-processing waste into value-added products.