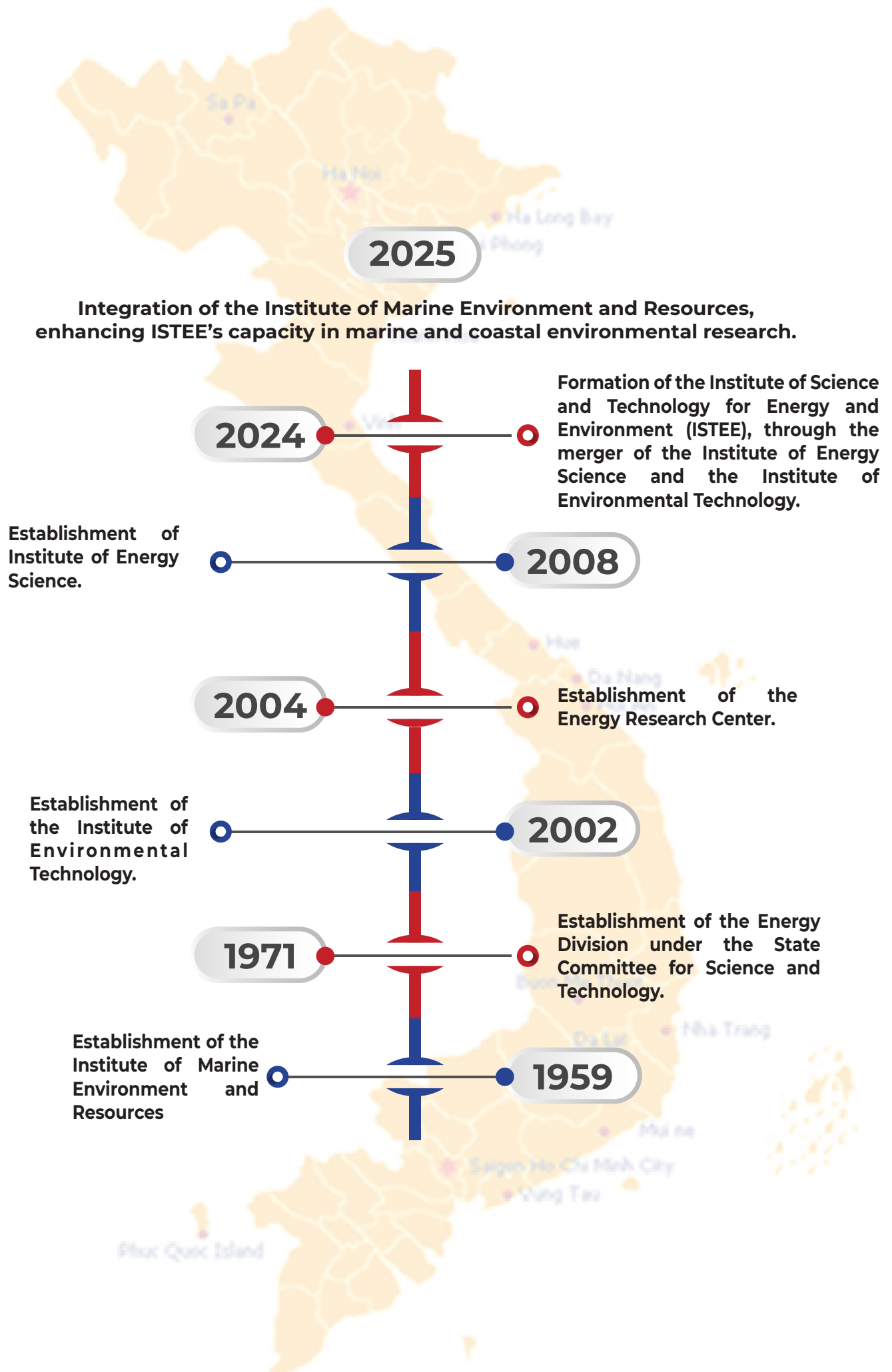


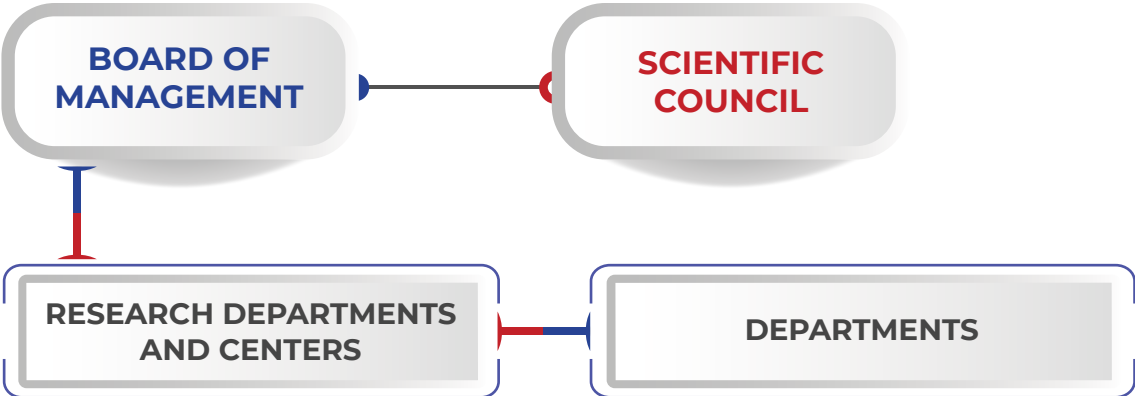


VIETNAM ACADEMY OF SCIENCE AND TECHNOLOGY
INSTITUTE OF SCIENCE AND TECHNOLOGY
FOR ENERGY AND ENVIRONMENT
(ISTEE)





ORGANIZATIONAL STRUCTURE



Environmental Biotechnology

Pollution Treatment Technologies

Environmental Chemistry and Physics

Energy and Environment

Sustainable Energy

New Energy Technologies

Research and Development (R&D)

Marine Environmental Geology and Chemistry

Marine Biological Resources and Applications

Marine Conservation and Industrial Ecology

Marine Environmental Dynamics and Remote Sensing

Administration

Center for Marine Technology Research and Do Son Oceanography Museum

Da Nang Environmental Technology Center

Center for Environmental Technology in Ho Chi Minh City

KEY FIGURES

15

Research Departments
and Centers

309

Staff Members

① SCIENTIFIC RESEARCH

2000++

Scientific Publications

1000++

Research Projects
(as of 2025)

13

Patents

② TRAINING

99

PhD Candidates

150

Master's Students

③ INTERNATIONAL COOPERATIONS

55

Ongoing MoUs with
International Research
Organizations

90

Collaborative Projects with
International Research
Organizations

35

International Conferences
Organized

ISTEE: PIONEERING SUSTAINABLE SOLUTIONS IN ENERGY, ENVIRONMENT, AND MARINE SCIENCE

The Institute of Energy and Environmental Science and Technology (ISTEE) is a premier Vietnamese scientific institution at the forefront of research, technology development, and high-level human resource training. Our mission is to drive sustainable development for Vietnam by delivering innovative solutions and strategic insights across the critical domains of energy, environment, and marine science.

We translate cutting-edge science into tangible impact, serving as a trusted advisor for national strategies, policies, and large-scale projects that shape the nation's economic and environmental future.

CORE COMPETENCIES: R&D LEADERSHIP

Our expertise is centered on three interconnected pillars of research and development:

- **Advanced Energy Technologies:** We are pioneering the future of energy by developing new, renewable, and non-traditional energy technologies. Our research encompasses high-capacity energy storage solutions, energy efficiency models that are both effective and environmentally sustainable.
- **Environmental Science & Technology:** Safeguarding our planet is central to our work. We develop advanced technologies for pollution treatment across key sectors including industry, healthcare, and agriculture. Our capabilities include sophisticated monitoring, analyzing, and controlling pollutants in Vietnam and transboundary regions, and we are actively developing low-emission technologies to support the national goal of achieving "Net-Zero" emissions.
- **Marine Science & Technology:** We are dedicated to the sustainable development of marine economies. Our work includes technologies for marine spatial planning and exploitation, advanced digital mapping, and ocean dynamics modeling. We provide scientific solutions for marine conservation, assess the environmental carrying capacity of marine areas, conduct economic valuations of marine ecosystems, and develop eco-friendly aquaculture technologies.



INTEGRATED SERVICES & SOLUTIONS

ISTEE bridges the gap between research and real-world application, offering a comprehensive suite of scientific and technological services.

- **Strategic Consulting & Policy Advisory:** We provide expert consulting for the planning, design, and supervision of major energy and environmental infrastructure projects. We also participate in the scientific appraisal, review, and development of economic-technical studies, national programs, and policies that advance socio-economic development while ensuring national security and environmental protection.
- **Technology Transfer & Application:** We specialize in the practical application and transfer of scientific and technological research outcomes in our core fields. This includes conducting energy and environmental audits to help organizations optimize performance and compliance.
- **Environmental & Energy Services:** Our service portfolio includes conducting Environmental Impact Assessments (EIAs), securing environmental permits, and performing environmental monitoring. We provide proven technology solutions for energy savings and efficiency and consult on the establishment and management of marine protected areas.
- **Human Capital Development:** We are committed to building future capacity by providing high-level training for professionals and researchers in energy, environmental, and marine sciences.

PARTNER WITH US

Through robust international cooperation, ISTEE connects global expertise with local needs. We are your ideal partner for navigating the challenges and opportunities of a sustainable future.



DEPARTMENT OF ENVIRONMENTAL BIOTECHNOLOGY

The Department of Environmental Biotechnology is dedicated to harnessing the power of biological systems to create sustainable solutions for complex environmental challenges. Our work integrates fundamental ecological science with cutting-edge biotechnological applications to deliver impactful results.

★ Core Competencies and Research Focus:

- Conducting fundamental research on environmental biotechnology and ecology to build a deep understanding of natural processes.
- Translating research outcomes into practical applications, including the development of novel bioactive substances, the use of bio-indicators for ecosystem health monitoring, the formulation of advanced bioproducts and bio-based nanomaterials.

★ Services and Technology Transfer:

- We provide expert scientific and technical consulting services and facilitate the transfer of innovative environmental biology technologies to our partners in industry and the public sector.



DEPARTMENT OF POLLUTION TREATMENT TECHNOLOGY

The Department of Pollution Treatment Technology delivers comprehensive, end-to-end solutions for the remediation and management of environmental pollution. We specialize in developing and deploying robust systems that address contamination while promoting resource efficiency and sustainability.

★ Core Competencies and Research Focus:

- Pioneering and implementing new technologies for the treatment of contaminated soil, water, air, and solid waste.
- Advancing waste recycling technologies with a strong focus on resource recovery and supporting the transition to a circular economy.
- Researching and developing highly energy-efficient and environmentally-friendly pollution treatment technologies.

★ Engineering and Project Services:

- Providing expert consulting for the design, technology appraisal, and installation oversight for environmental treatment investment projects.
- Managing full turn-key execution of pollution treatment facilities, including civil works construction and equipment installation.



DEPARTMENT OF ENVIRONMENTAL CHEMISTRY AND PHYSICS

The Department of Environmental Chemistry and Physics leverages advanced chemical and physical science to develop materials and technologies that enhance environmental quality and sustainability across multiple sectors.

★ Core Competencies and Research Focus:

- Conducting in-depth research on physico-chemical processes to support environmental treatment, resource recovery, and pollution control.
- Developing and applying innovative materials such as catalysts, adsorbents, and functional compounds tailored for environmental applications.
- Exploring cross-sectoral solutions that apply environmental chemistry and materials science to industries such as water treatment, agriculture, and pharmaceuticals.

★ Services and Technology Transfer:

- We offer tailored consulting, research partnerships, and technology deployment services in material innovation and pollution treatment systems for both industry and government sectors.
- Providing technical training and collaborate with domestic and international partners to strengthen human capacity in environmental materials and chemical process engineering.



DEPARTMENT OF SUSTAINABLE ENERGY

The Department of Sustainable Energy delivers forward-thinking research and strategic solutions to support Vietnam's transition to a low-carbon, energy-efficient future.

★ Core Competencies and Research Focus:

- Analyzing national energy security and economics, delivering insights that support sustainable energy planning and policy development.
- Developing advanced models to optimize energy supply-demand balance and enhancing the performance of modern energy systems.
- Researching energy-environment interactions, providing scientific foundations to address climate change and reduce carbon intensity.

★ Services and Technology Transfer:

- Translate scientific findings into real-world solutions by supporting the implementation of energy strategies and low-emission technologies.
- We offer expert consulting and capacity building to government, industry, and academic partners seeking innovative approaches to sustainable energy development.



DEPARTMENT OF NEW ENERGY TECHNOLOGIES

The Department of New Energy Technologies pioneers research and development in next-generation energy systems, advancing Vietnam's shift toward smarter, cleaner, and more resilient power infrastructure.

★ Core Competencies and Research Focus:

- Research focuses on smart grid technologies, including microgrid systems and intelligent control platforms.
- Hybrid energy solutions are developed by integrating distributed renewable sources such as wind and solar.
- Innovation extends to testing, validation, and performance assessment of energy equipment, with a strong emphasis on quality and reliability.
- Advanced system architectures are explored to enable smart energy management and enhance grid flexibility.



★ Engineering and Project Services:

- Research outcomes are translated into real-world applications through pilot projects, industry collaboration, and consulting support.
- Technical expertise and training programs empower stakeholders to adopt and scale up emerging energy innovations.



DEPARTMENT OF RESEARCH & DEVELOPMENT (R&D)

The R&D Department serves as a dynamic innovation hub, advancing science-based solutions in environmental quality, energy transition, and sustainable technology systems.

★ Core Competencies and Research Focus:

- Develops advanced analytical methods for environmental, biological, pharmaceutical, and food-related monitoring.
- Designs and applies novel materials and technologies that support circular economy models and low-emission goals.
- Develops and implements integrated energy systems that enhance sustainability in industrial and community applications.
- Conducts life-cycle environmental assessments, emission inventories, and climate risk analyses to support smart policy and planning.
- Leads baseline investigations in energy and environmental systems, building national datasets and evaluation frameworks.



★ Services and Technology Transfer:

- Offers turnkey services in environmental impact assessment, permitting, emission monitoring, and greenhouse gas accounting.
- Builds decision-support tools including environmental quality indices and technical-economic baselines for energy-environment sectors.
- Provides hands-on training in environmental analysis, chemical safety, and digital monitoring in line with Industry 4.0 standards.
- Partners with public and private stakeholders to develop, test, and commercialize innovative technologies for sustainability.



DEPARTMENT OF MARINE ENVIRONMENTAL GEOLOGY AND CHEMISTRY

The Department of Marine Environmental Geology and Chemistry integrates earth science, oceanography, and environmental chemistry to advance sustainable management and protection of Vietnam's coastal and marine ecosystems.

★ Core Competencies and Research Focus:

- Investigates coastal and marine geology, seabed morphology, and geodynamic processes to assess natural hazards and inform spatial planning.
- Analyzes sedimentation, geochemical cycles, and pollution pathways in nearshore and offshore marine environments.
- Explores the chemical properties of seawater and sediment-water interactions to monitor and forecast environmental changes.
- Develops technologies for the extraction of valuable compounds from marine resources to support blue economy initiatives.
- Designs and implements pollution prevention strategies and remediation technologies tailored for sensitive marine zones.



★ Services and Technology Transfer:

- Delivers integrated environmental assessments to guide coastal development, risk management, and marine conservation.
- Supports government and industry with data-driven insights, marine pollution control solutions, and decision-support tools.
- Contributes to national marine policies through scientific studies that enhance sustainable resource use and ecosystem resilience.

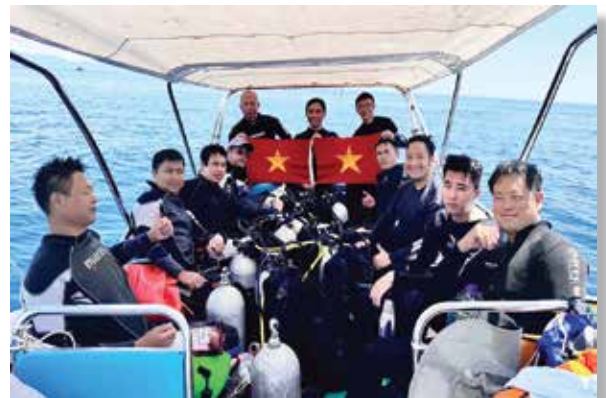


DEPARTMENT OF MARINE BIOLOGICAL RESOURCES AND APPLICATIONS

The Department of Marine Biological Resources and Applications drives innovation at the intersection of marine biology, biotechnology, and ecosystem science to unlock the potential of Vietnam's rich marine life.

★ Core Competencies and Research Focus:

- Conducts ecological investigations of marine species, populations, and communities to assess biodiversity and resource sustainability.
- Studies ecosystem dynamics and biological interactions to understand environmental risks, seafood safety, and disease ecology.
- Isolates and refines bioactive compounds from marine organisms for use in health, agriculture, and bioproduct development.
- Applies biological indicators to monitor ecosystem health and guide pollution control strategies.
- Leverages modern tools—such as DNA barcoding, metabarcoding, and metagenomics—for advanced biodiversity analysis.



★ Services and Technology Transfer:

- Assesses ecosystem services and provides strategies for the sustainable use of marine biological resources.
- Delivers technical guidance and scientific support for bioprospecting, conservation planning, and marine resource management.
- Partners with public and private sectors to commercialize marine-based innovations and strengthen blue economy opportunities.



CENTER FOR MARINE TECHNOLOGY RESEARCH AND DO SON OCEANOGRAPHY MUSEUM

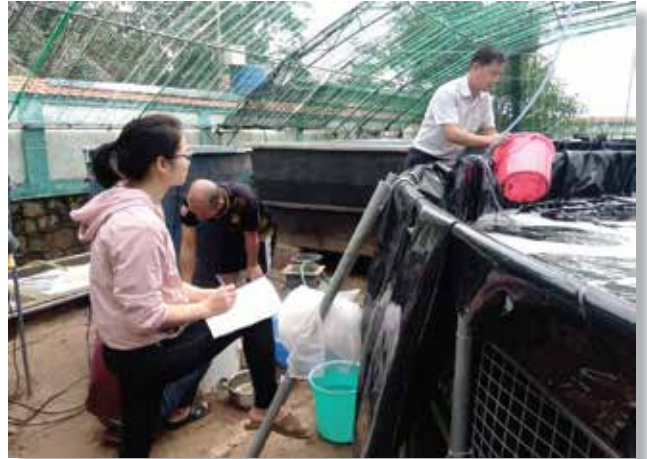
The Marine Technology Research Center and Do Son Oceanographic Museum plays a dual role in advancing applied marine science and fostering public understanding of Vietnam's ocean environments. By integrating field research, technological development, and science communication, the Center contributes directly to national marine sustainability and ocean

★ Core Competencies and Research Focus:

- Operates as a regional oceanographic base under the Vietnam Academy of Science and Technology, supporting field research and long-term monitoring.
- Develops and tests marine technologies aimed at sustainable resource exploitation and environmental resilience.
- Conducts oceanographic surveys and environmental assessments to guide marine spatial planning and conservation.
- Manages the Do Son Oceanographic Museum as a center for marine education, outreach, and heritage preservation.
- Organizes exhibitions, training programs, and communication initiatives to connect science with the public.

★ Services and Technology Transfer:

- Offers access to advanced field stations, sampling platforms, and marine laboratories for collaborative research and demonstration projects.
- Serves as a bridge between scientists, policymakers, and local communities through knowledge exchange and awareness-building.
- Supports Vietnam's marine innovation agenda through integrated research, public engagement, and capacity development.



DEPARTMENT OF MARINE CONSERVATION AND INDUSTRIAL ECOLOGY

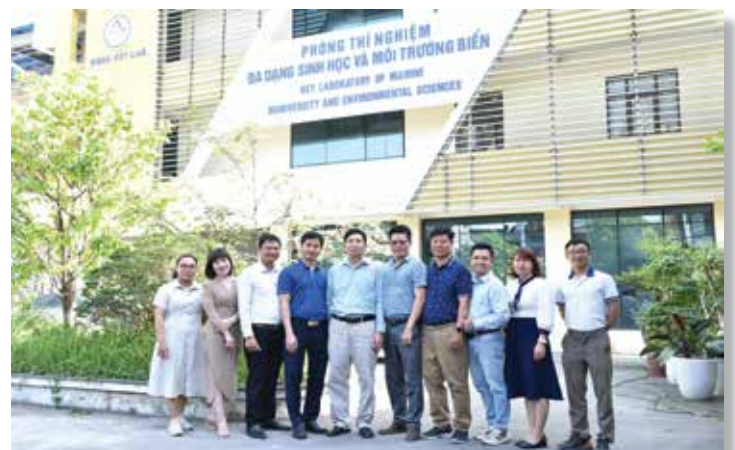
The Department of Marine Conservation and Industrial Ecology leads research and strategy development to protect marine biodiversity, guide conservation policy, and promote ecological sustainability in coastal development.

★ Core Competencies and Research Focus:

- Assesses the conservation potential of marine ecosystems, with a focus on rare, endemic, and indicator species.
- Monitors marine biodiversity and builds comprehensive databases to support habitat protection and ecosystem resilience.
- Evaluates the effectiveness of marine protected areas and recommends zoning, governance, and adaptive management strategies.
- Develops conservation protocols, biodiversity assessment tools, and sample authentication methods for research and regulatory use.
- Designs ecological solutions to restore biodiversity and integrate environmental safeguards into coastal industrial zones.

★ Implementation and Policy Support:

- Provides scientific input for marine spatial planning, protected area establishment, and biodiversity legislation.
- Supports coastal industries in aligning with environmental regulations and sustainability targets.
- Collaborates with national and international partners to deliver innovative, evidence-based conservation outcomes.



CENTER FOR ENVIRONMENTAL TECHNOLOGY

IN HO CHI MINH CITY

Located in Vietnam's southern economic hub, the Center for Environmental Technology delivers region-specific solutions to environmental challenges through applied research, technology transfer, and stakeholder engagement. The Center plays a key role in driving sustainable development and environmental protection across the Mekong Delta and Southeast region.

★ Core Competencies and Research Focus:

- Conducts applied research focused on pollution control, resource recovery, and environmental technology tailored to the needs of southern Vietnam.
- Transfers laboratory-proven solutions into practice, adapting technologies to local conditions in industry, urban infrastructure, and agriculture.
- Provides scientific services in environmental analysis, impact assessment, remediation, and planning for pollution prevention and control.
- Supports regional authorities and enterprises with expert consulting on environmental compliance, sustainability strategies, and green innovation.
- Participates in collaborative training programs to strengthen technical capacity across public and private sectors.



★ Implementation and Policy Support:

- Acts as a bridge between science, policy, and local communities to co-develop solutions for resilient environmental management.
- Hosts partnerships with universities, government agencies, and industry to accelerate technology deployment and policy integration.
- Enhances Vietnam's southern environmental strategy through innovation, education, and science-based decision-making.



DA NANG ENVIRONMENTAL TECHNOLOGY CENTER

Situated in the heart of Central Vietnam, the Da Nang Environmental Technology Center addresses the region's unique environmental needs through research, innovation, and capacity building. The Center supports sustainable development in the Central Coast and Central Highlands by advancing science-based solutions adapted to diverse ecological and socio-economic contexts.

★ Core Competencies and Research Focus:

- Conducts applied research on environmental technologies focused on pollution reduction, ecosystem protection, and sustainable land-water management.
- Implements and localizes proven technologies for use in urban, coastal, and rural settings across Central Vietnam.
- Provides a comprehensive suite of scientific services, including environmental assessment, forecasting, remediation, and strategic planning.
- Advises local governments and industries on environmental regulations, green infrastructure, and climate resilience.
- Offers training programs and technical assistance to strengthen local capacity for environmental monitoring and technology adoption.

★ Implementation and Policy Support:

- Bridges research with real-world application by collaborating closely with public agencies, businesses, and communities.
- Supports integrated environmental governance by contributing to regional policy, infrastructure development, and public awareness.
- Drives green innovation and sustainable practices in one of Vietnam's most climate-vulnerable regions.



DEPARTMENT OF MARINE ENVIRONMENTAL DYNAMICS AND REMOTE SENSING

The Department of Marine Environmental Dynamics and Remote Sensing advances scientific understanding of ocean processes through cutting-edge modeling, data analytics, and satellite-based monitoring and observation. Its research supports climate adaptation, disaster risk reduction, and sustainable coastal and marine management.

★ Core Competencies and Research Focus:

- Studies physical oceanographic processes and their interactions with topography, atmosphere, and marine ecosystems.
- Models hydrodynamics and the transport of materials and pollutants in coastal and offshore waters.
- Assesses the impacts of natural and anthropogenic stressors, including climate change, on marine dynamics and water quality.
- Applies remote sensing and GIS technologies to monitor, assess, and forecast environmental changes in coastal and marine areas.
- Develops marine geospatial databases and thematic mapping tools for research, planning, and decision support.

★ Implementation and Policy Support:

- Provides early-warning tools and scenario modeling to forecast marine hazards and inform disaster preparedness.
- Supports marine spatial planning, environmental risk assessment, and ecosystem-based management.
- Enhances Vietnam's digital ocean capabilities through integrated research, innovation, and technology transfer.



DEPARTMENT OF ENERGY AND ENVIRONMENT

The Department of Energy and Environment focuses on the intersection of clean energy and environmental protection, developing technologies and solutions that support circular economy models and sustainable resource use.

★ Core Competencies and Research Focus:

- Develops innovative processes and equipment for energy storage, conversion, and efficiency using advanced materials and smart systems.
- Designs renewable energy solutions derived from biomass and waste, enabling both pollution reduction and energy recovery.
- Researches the detection, control, and treatment of emerging environmental pollutants using next-generation technologies.
- Integrates clean energy with environmental remediation through scalable, market-ready technology packages.
- Applies automation, digitalization, and modeling to improve performance and intelligence in energy–environment systems.

★ Implementation and Policy Support:

- Translates research into deployable technologies for industrial, municipal, and rural settings.
- Provides training for technical personnel and promotes international collaboration in the fields of clean energy, waste-to-energy, and environmental systems.
- Contributes to national sustainability goals through innovation, consulting, and policy-relevant research.



ISTEE RESEARCH FACILITY IN HAI PHONG

Located along Vietnam's northern coastline, the ISTEE Research Facility in Hai Phong plays a key role in advancing marine and environmental science through integrated research, technical services, and technology demonstration. The facility supports national strategies in coastal management, environmental protection, and sustainable marine development.

★ Core Competencies and Research Focus:

- Conducts foundational research on marine resources, environmental dynamics, and coastal resilience.
- Investigates and proposes science-based solutions for sustainable resource use, disaster mitigation, and environmental restoration.
- Implements field-based monitoring, surveying, and environmental evaluation across estuarine, coastal, and island ecosystems.
- Applies research outcomes to practical applications in marine spatial planning, risk assessment, and ecosystem-based management.
- Supports the design, pilot testing, and evaluation of advanced technologies for marine and environmental applications.



★ Implementation and Policy Support:

- Offers consulting, evaluation, and scientific review services for technical reports, environmental impact assessments, and infrastructure planning.
- Hosts specialized facilities for marine sampling, prototyping, and technical training.
- Engages in national and international cooperation to promote knowledge exchange, joint research, and technology transfer in the marine and environmental sectors.





ISTEE

VIỆN KHCN NĂNG LƯỢNG & MÔI TRƯỜNG

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