

Assistant Professor Wirote Laongmanee, Ph.D.

Expert in Remote Sensing and Geo-informatics for Marine Resources

Assistant Professor Dr. Wirote Laongmanee is a seasoned expert with over **34 years of experience** in marine technology, surveying, and geospatial analysis. He currently serves as a faculty member at the **Faculty of Marine Technology, Burapha University, Chanthaburi Campus**, where he specializes in leveraging advanced technology for the sustainable management of marine and coastal resources.

Core Expertise

- **Remote Sensing (RS) & Geo-informatics (GIS):** Specialized in applying geospatial technologies to monitor and manage marine and coastal environments.
 - **Advanced Coastal Surveying:** Expert in the use of **satellite imagery and Unmanned Aerial Vehicles (UAV/Drones)** for the survey and monitoring of seagrass meadows and mangrove forests.
 - **Oceanographic Data Visualization:** Proficiency in using **Google Earth Engine (GEE)** for large-scale planetary analysis and oceanographic data visualization.
 - **Coastal Vulnerability & Modeling:** Skilled in integrated vulnerability assessments of coastal areas and developing hydrological models for estuaries.
 - **Marine Satellite Applications:** Expertise in the application of Global Navigation Satellite Systems (GNSS) and the Beidou system for marine safety, environmental protection, and coastline extraction.
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Professional Experience

- **Assistant Professor**, Faculty of Marine Technology, Burapha University (2023–Present): Managing instruction in geo-informatics and remote sensing.
 - **Information Officer**, SEA START Regional Center, Chulalongkorn University (2004–2012): Managed meteorological databases and researched climate change impacts.
 - **Assistant Director of Computer Center**, Thailand Environment Institute (2003–2004): Maintained institutional databases and network systems.
 - **Marine Engineer / Information Officer**, SEAFDEC Training Department (1990–2003): Developed GIS databases and maintained computer networks on research vessels.
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Education

- **Ph.D. in Survey Engineering**, Chulalongkorn University (2013).
 - **M.Sc. in Geoinformatics**, Burapha University (2007).
 - **B.Tech. in Business Information**, Sukhothai Thammathirat Open University (2003).
 - **B.S. in Agricultural Extension and Cooperatives**, Sukhothai Thammathirat Open University (1995).
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Selected Research & International Contributions

- **Mangrove Ecosystems:** Published research on spatial and temporal patterns of mangrove change in the Mekong region spanning four decades.
 - **Coral Reef Mapping:** Applied satellite data processing through Google Earth Engine to map coral reef distributions.
 - **Climate Resilience:** Contributed to regional projects assessing coastal vulnerability to sea-level rise in Southeast Asia.
 - **International Speaker:** Served as a resource person for the UN Ocean Decade kickoff workshop on seagrass and the China-ASEAN Beidou Development Symposium.
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Collaboration & Contact

Dr. Wirote is open to academic partnerships, research collaborations, and technical consulting in the fields of marine GIS, remote sensing, and coastal resource conservation.

- **Email:** wirote_lao@buu.ac.th / wirotela@gmail.com
 - **Office:** Faculty of Marine Technology, Burapha University, Chanthaburi Campus
 - **Full Portfolio:** [BUU E-Portfolio](#)
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Mapping coastal changes is like creating a high-resolution time-lapse of the ocean's autobiography, allowing us to read the history of mangroves and seagrass to predict their future chapters.