

PROVISIONAL PROSPECTUS

In-house Capacity Building Program on Fisheries Acoustics: Application and Use of the BioSonics DT-X Extreme Portable Scientific Echosounder (12-14 October 2026)

Organization Details

Project Title	U.S. RSA Project (PIO Grant No. 72048623IO00002)
Section/Division Name	Fishing Technology Section Research and Development Division SEAFDEC Training Department
Lead Technical Officer (LTO)	Dr. Nopporn Manajit (Senior Researcher)
Activity Leader	Ms. Saruttaya Jaroonpongsawat (Fishing Technology Researcher)
Program Manager	Ms. Panitnard Weerawat (Research and Development Division Head)
Contact Person	Dr. Nopporn Manajit (Senior Researcher) Ms. Saruttaya Jaroonpongsawat (Fishing Technology Researcher)

Introduction

The integration of advanced hydroacoustic technology is critical for the Southeast Asian Fisheries Development Center (SEAFDEC) and the Department of Fisheries (DOF) to accurately assess marine and inland aquatic resources. To ensure researchers maximize the capabilities of the newly acquired BioSonics DT-X Extreme system, this intensive training program will be led directly by a certified BioSonics Company Technician.

This program provides SEAFDEC and DOF researchers with authoritative, factory-level instruction. The curriculum spans from initial system unboxing and hardware verification to field deployment, advanced data interpretation, and critical preventative maintenance, ensuring the equipment is utilized safely and effectively for long-term stock assessment.

This specialized training and the capital equipment acquisition are made possible through the funding and strategic partnership of the US-RAS project. US-RAS budgetary support covers the procurement of the BioSonics DT-X Extreme hardware and software, the BioSonics technician's instructional fees, vessel chartering in Kanchanaburi, and all participant accommodations and logistical expenses.

Objective

The program aims to strengthen the technical capacity of RDD staff in the application of fisheries acoustics for fisheries resource assessment and to develop a pool of competent in-house resource persons capable of supporting and delivering advanced hydroacoustic training in the region. The program will focus on practical skills in the operation and application of the BioSonics DT-X Extreme Portable Scientific Echosounder, together with relevant data-processing and analytical software.

Expected Outputs

- **Commissioned Hardware:** A fully unboxed, verified, and operational BioSonics DT-X Extreme system, checked directly by the factory technician for immediate field readiness.
- **Software-Ready Fleet:** Visual Acquisition and Visual Aquatic software successfully installed, licensed, and configured on all designated SEAFDEC and DOF field laptops.
- **Trained Scientific Cohort:** A specialized team of SEAFDEC and DOF researchers formally trained in both the physical deployment of acoustic hardware and the digital processing of split-beam data.
- **Baseline Inland Dataset:** A high-fidelity acoustic dataset (raw .dt4 files) successfully recorded during the live Kanchanaburi reservoir/river field exercise.
- **Actionable Data Products:** Fully processed echo integration results, including spatial distribution maps and target tracking metrics, generated by the participants.

Expected Outcomes

Maximized Equipment Lifespan: Direct instruction on factory-recommended handling, O-ring maintenance, and proper stowage will drastically reduce the risk of water intrusion and corrosion, ensuring the US-RAS capital investment serves the departments for years.

The program will contribute to the establishment of a technical resource pool to support future Training-of-Trainers (ToT) programs and pilot demonstration surveys. The data collected during the pilot surveys will also provide practical learning materials and training datasets for future capacity-building activities. Through this initiative, SEAFDEC/TD aims to strengthen and sustain its technical capacity to support regional training activities in fisheries resource assessment.

Date, Venue, and Accommodation

The training course will be organized for 3 days from 12 to 14 October 2026 at Srinagarind Dam, Kanchanaburi, Thailand.

- Half-day sessions for online training and two and a half days of on-site training for practical survey.

Participants

1. Five (5) Fishery Researchers from the SEAFDEC/TD
 - Three (3) from RDD
 - Two (2) from MES
2. Five (5) Fishery Researchers from the Department of Fisheries, Thailand
 - One (3) from Inland Fisheries Research and Development Division
 - Two (2) from Marine Fisheries Research and Development Division
3. One (1) instructor from BioSonics Company

Tentative Training Schedule

12 October 2026	Online class
0800-1200 hrs.	• Introduction and operating principles of the DTX (1 hour) • Instrument setup, survey planning and Visual Acquisition software (1 hour) • Post-processing using Visual Aquatic software (1 hour) • Maintenance and calibration, Q&A (1 hour)
1300-1600 hrs.	Installation of pole mount Equipment checks before field survey
13 October 2026	Field survey - Srinakarin Dam, full day
14 October 2026	Data processing - classroom session, full day

Technical Coordinator

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