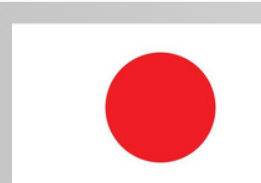
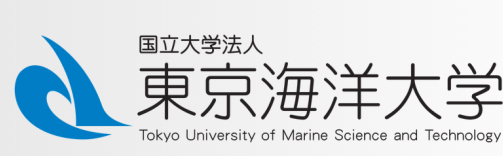




World Organisation
for Animal Health



Australian Government
Department of Agriculture,
Fisheries and Forestry



SEAFDEC/AQD's AQUATIC ANIMAL HEALTH ACTIVITIES IN THE REGION

1 SEAFDEC

Departments



Secretariat

Coordination of general policies and planning of SEAFDEC



Training Department (TD)

Development of modern fishery techniques to enhance selective harvest rates (marine capture fisheries)



Marine Fisheries Research Department (MFRD)

Fisheries post-harvest technology and development of fish processing industry



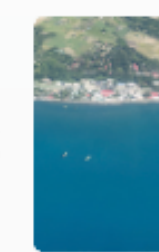
Marine Fishery Resources Research Development & Management Department (MFRDMD)

Sustainable management of fishery resources, assessment, conservation, and management of sea turtles



Inland Fishery Resources Development & Management Department (IFRDMD)

Sustainable development and management of inland capture fisheries in the Southeast Asian region



Aquaculture Department (AQD)

To develop the aquaculture potentials of the region. Closely coordinate with the DA of the Philippines



- An autonomous intergovernmental association established to promote fisheries development in Southeast Asia in 1967
- Aims to develop fishery potentials in Southeast Asia through research, training, and information services
- Composed of 11 Member Countries (including Japan)
- 5 Departments + Secretariat

2

SEAFDEC Aquaculture Department

Southeast Asian Fisheries Development Center Aquaculture Department (SEAFDEC/AQD)

- Established in 1973 in Tigbauan, Iloilo, Philippines
- Mandated to:
 - Promote and undertake research on aquaculture relevant and appropriate to the region
 - Encourage human resource development in aquaculture through training and extension
 - Disseminate and exchange information in aquaculture

Activities



Aquaculture Research



Training



Publication



Library & Museum Tours



Extension & Production



Laboratory Services

Divisions



Research Division (RD)



Technology Verification & Extension Division (TVED)



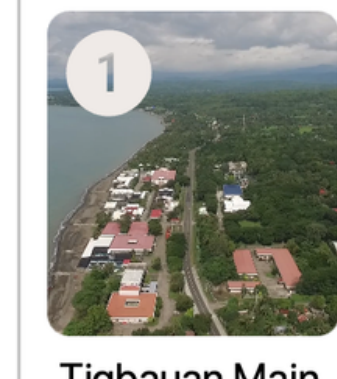
Training & Information Division (TID)



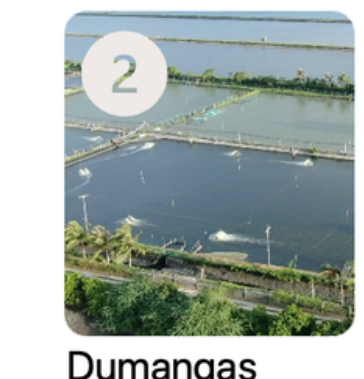
Administration & Finance Division (AFD)



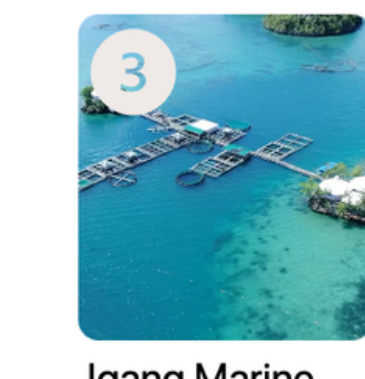
Stations



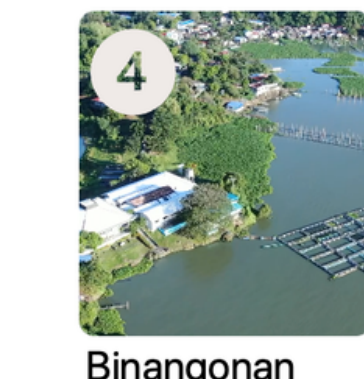
Tigbauan Main Station (TMS)



Dumangas Brackish-water Station (DBS)

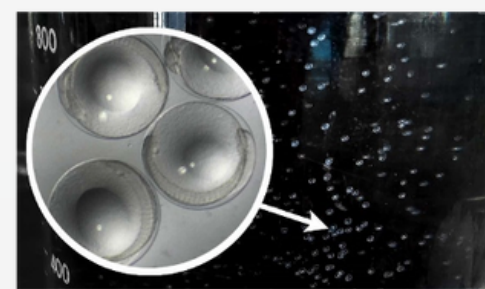


Igang Marine Station (IMS)



Binangonan Freshwater Station (BFS)

Thrusts of SEAFDEC/AQD



1. Fry Sufficiency Program



2. Development of Cost Efficient Feeds



3. Oplan Balik Sugpo (Operation Black Tiger Shrimp Revival)



4. Joint Mission for Accelerated Nationwide Technology Transfer Program (JMANTTP II)



5. Manpower Development



6. Production of priority commodities using innovative aquaculture technologies

Thematic Programs of AQD

serve as the backbone of SEAFDEC/AQD's research efforts



Quality Seed for Sustainable Aquaculture (QSSA)

Generate, verify, and promote technologies to ensure the sustainable production of quality seed stock for aquaculture as well as for stock enhancement



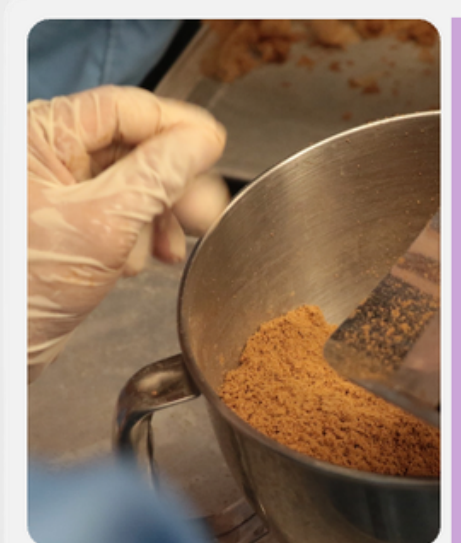
Maintaining Environmental Integrity through Responsible Aquaculture (MEITRA)

Develop sustainable aquaculture technologies by integrating environmental factors in SEAFDEC/AQD research activities and maintain environmental integrity by promoting responsible aquaculture practices

2026 Distribution of studies

50 Studies

Under the Departmental and Regional Programs



Healthy and Wholesome Aquaculture (HWA)

Improve aquaculture production through innovations in nutrition and feeding, fish health management, and in maintaining the environmental integrity of the aquaculture systems



Meeting Social and Economic Challenges in Aquaculture Program (MSECAP)

Develop and implement social and economic strategies in aquaculture and resource management to secure food and income through stakeholder collaboration

QSSA

21 Studies

HWA

10 Studies

MEITRA

9 Studies

MSECAP

04 Studies

Regional Programs
Including GOJ-TF Studies

06 Studies

3 Research Studies on Aquatic Animal Health

Exploiting Predatory Bacteria: Development of Efficient Administration Technology of Marine Predatory Bacteria as Antimicrobial Therapy for Shrimp *Vibrio* Disease Management

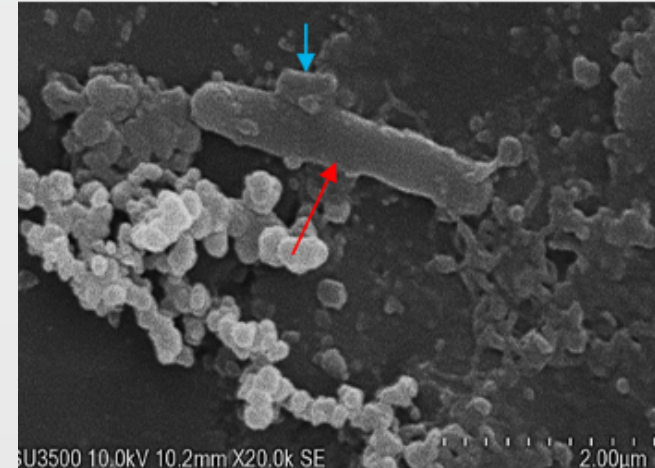
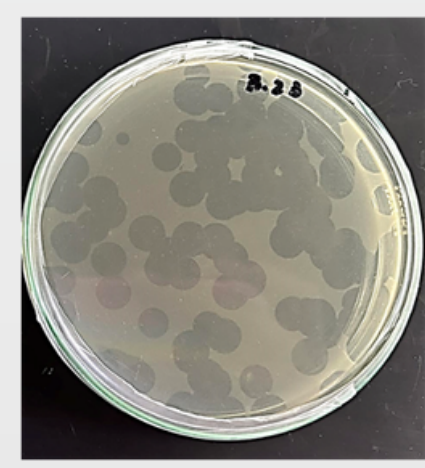
Utilizes predatory bacteria such as *Bdellovibrio* and like organisms (BALOs) which provides another way to control *Vibrio* and other bacterial pathogens in shrimp aquaculture

- Isolation of *Halobacteriovorax vibronivorans* from brackishwater pond sediments that can lyse *Vp_{AHPND}*, *Vibrio harveyi*, *V. alginolyticus*, *V. cholerae*, *Pseudomonas luteola* and *Aeromonas hydrophila*.

- *In vitro* bacteriolytic test conducted showed total inhibition of *Vp_{AHPND}* with liquid preparation of BALOs when compared with probiotic, *Bacillus badius*.

- Microencapsulated BALOs show a decrease in *Vp_{AHPND}* from 10^6 CFU ml⁻¹ to 10^2 CFU ml⁻¹ during the 8 days *in vitro* culture.

- Microencapsulated BALOs show a decrease in *Vp_{AHPND}* from 10^6 CFU ml⁻¹ to 10^2 CFU ml⁻¹ during the 8 days *in vitro* culture.

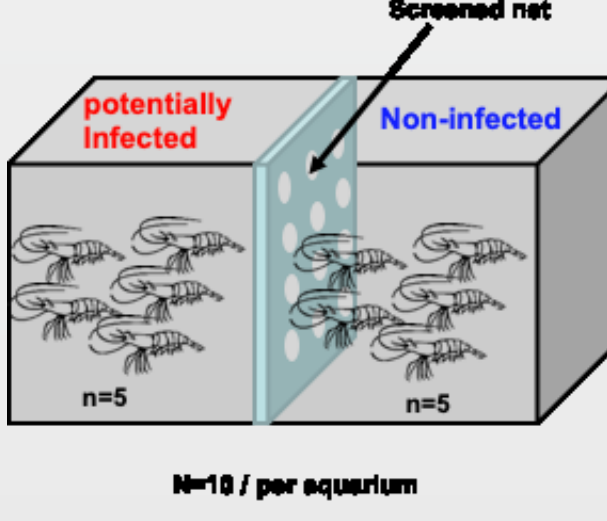


Control, Management, and Determination of Spore Activation and Infectivity of *Enterocytozoon hepatopenaei* (EHP) in Shrimps

Determine the etiological factors that help the activation of EHP spores and their infectivity in shrimp ; Aid in determining inhibitors which will contribute in developing management and control measures

- Cohabitation of EHP (+) *P. monodon* with apparently healthy *M. rosenbergii* shows transmission at 35 days, while for apparently healthy *L. vannamei*, transmission occurs at day 45. For interspecies transmission, both *M. rosenbergii* and *L. vannamei* successfully transmitted EHP at 15 days.

- Different temperatures for storage of EHP spores were tested: -10 °C, -20 °C, -30 °C, and -80 °C for 60 days. Results showed that all temperatures yielded positive results, but only nested (+) from the initial first-step EHP (+) after 60 days of cold storage.

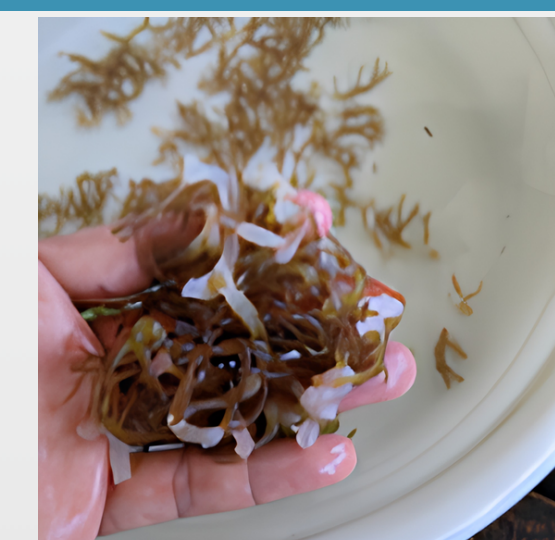


Improvement of productivity and quality of cultured seaweeds

Identification of putative microorganisms causing "ice-ice" (IID) disease in seaweed; Determine the changes in culturable microbial diversity in a sea-based farm affected by IID in relation to seasonal environmental conditions

- Experimental runs for dry and wet seasons, along with isolation of ice-ice disease-causing bacteria, have been conducted

- Presumptive carrageenan-lysing bacteria, *Pseudomonas* and *Vibrio* species, were predominantly observed and isolated in seaweeds affected by IID



4 Diagnostic and Analytical Laboratories



Level 1:
Dissection, Necropsy,
Gross Examination,
Microscopy



Level 2:
Bacteriology,
Histopathology,
Parasitology, etc.



Level 3:
Molecular
Biology, Electron
Microscopy, etc.