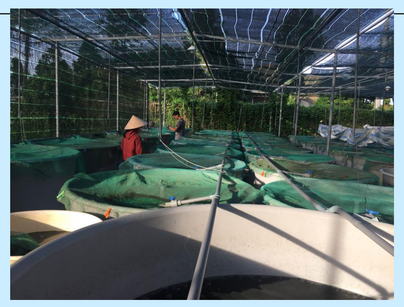
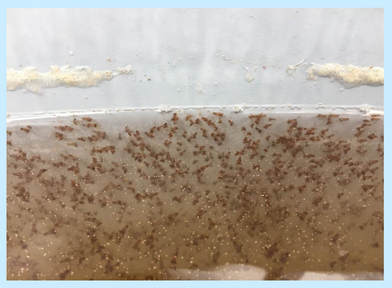
Progress of Joint Research Activities

Research No.: ⑱ F-2 ODA Loan Joint Research | **Date:05/Nov/2019**

1	**General Title**	**Green technology innovation for aquaculture**
2	**Core Members**	**CTU**: Tran Ngoc Hai (Project Leader), Pham Thanh Liem, Nguyen Van Hoa, Vo Nam Son, Lam My Lan, Le Quoc Viet, Duong Thuy Yen, Truong Quoc Phu, Bui Minh Tam, Tan Thi Thanh Hien, Pham Minh Duc, Tran Thi Tuyet Hoa, Chau Tai Tao, Pham Thi Tuyet Ngan, Huynh Thanh Toi, Nguyen Thanh Phuong, Tu Thanh Dung, Nguyen Thi Ngoc Anh, Nguyen Hoang Vinh, Duong Nhut Long, Vo Hoang Liem Duc Tam, Dao Minh Hai, Ly Van Khanh, Tran Nguyen Duy Khoa, Bui Thi Bich Hang, Nguyen Thi Ngoc Tran
		Japanese Universities: Shunsuke Koshio (Kagoshima, Co-project leader), Hajime Matsubara (Kanazawa), Takeshi Terahara (TUMSAT), Tomorani Kotani (Kagoshima), Akira Kurihara (Kyushu), Yutaka Takeuchi (Kagoshima)
3	**Duration**	Jan.,2018 – Dec.,2020 (3 years)
4	**Main Objectives**	The general objectives are to develop and apply advanced and environmental friendly technologies in aquaculture for sustainable development of aquaculture in the Mekong Delta.
5	**Focal Points**	F-2-1: Totally 7/11 experiments - activities on larval culture and grow-out of *Pangasius* catfish and *Clarias* catfish in recirculating systems have been being conducted. F-2-2. Totally 5/5 experiments on larval culture of white shrimp (*L vannamei*) and 3/5 experiments on larval culture of freshwater prawn (*M. rosenbergii*) applying biofloc technology have been conducted. F-2-3. The survey on marine fish cage culture (Nha Trang, Ninh Thuan, Kien Giang) and 6 experiments on nursing of pompanos fingerlings were conducted. The experiment on grow-out of pompanos in marine cage is being conducted F-2-4. Total of 3/5 experiment on seaweed-shrimp co-culture and 5/6 experiments on freshwater prawn – rice culture have been being conducted at CAF, Bac Lieu and Ca Mau province. F-2-5. Experiments on broodstock culture of pompanos fish and spotted scat fish have been being conducted. F-2-6. Studies on genetic diversity, spawning performance, crossed breeding and growth performance of *Clarias* catfish larvae, fingerlings and broodstocks have been being conducted.

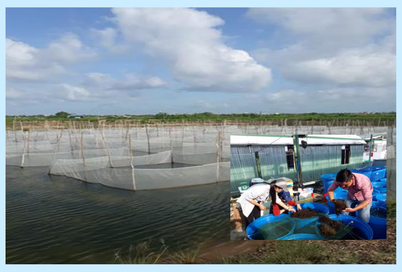
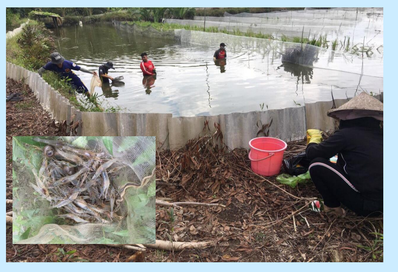



Pangasius Catfish and Clarias catfish culture at CAF

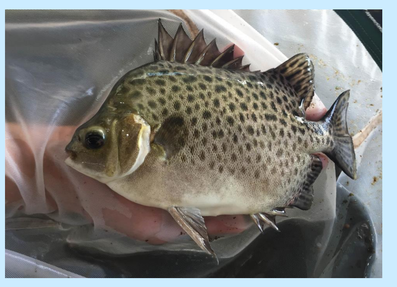



Freshwater prawn larval rearing in Bioflocs system at CAF

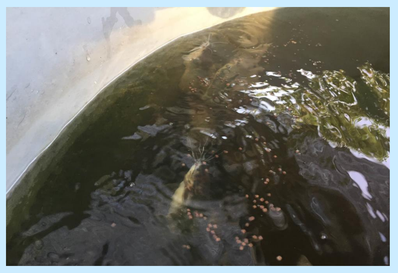

Nursing of Popanos fish in recirculating systems at CAF

Integrated rice-prawn and shrimp-seaweed co-culture at CAF, Ca Mau and Bac Lieu

Spotted scat fish broodstock culture in recirculating system

Culture of Clarias catfish crossed from different broodstock sources at CAF

Outcomes obtained

- Number of PhD students being trained: 05/04
- Number of graduates participated doing research: 7/16
- Number of national and international conferences: 1/7
- Number of people trained: 0/210
- Number of national articles: 7 published, 15 submitted / 70
- Number of international articles: 1 published /21
- Number of books published: 0/6
- Number of new technology developed: 0/6

6	Comments	This research is on going