



**Australia Awards**

# Australia Awards in Indonesia - Short Term Award Aquaculture Benchmarking



*Dr. Paul McShane, Dr. Kyall Zenger, Sally McShane and the participants of the Aquaculture Benchmarking Short Term Award at the Pre-Course workshop at Padma Hotel, Bandung.*

Pre-course workshop held in Bandung, in April 2018.

Two-week short course held in North Queensland May 2018 (Townsville, Cairns with regional site visits).

Networking events at Great Barrier Reef Marine Park Authority and touring/diving the Great Barrier Reef.

Interactive aquatic animal health workshop with Dr Agus Sunarto (CSIRO) and JCU experts.

Tour and demonstration of the largest marine and aquaculture research facility in Australia (MARFU), JCU Townsville.

Visit and demonstration of Grouper, Barramundi, and ornamental fish facilities.

Visit to the Bribie Island aquaculture research facility Brisbane.

Guided tour of the Sydney fish market and demonstration of world's best practice in seafood supply chain management.

Post course workshop held in Ubud, Bali. Tour of Balai Gondol, north Bali.

A short course bench marking best practice for Indonesia's rapidly growing aquaculture sector concluded in Bali with a three-day workshop in September 2018. The 27 participants represented government (including the Coordinating Ministry of Maritime Affairs), the knowledge sector and the private sector. Participants presented the results of their individual projects including lessons learned from benchmarking examples. The intensive program in Australia promoted innovation in aquatic animal health, aquafeed, selective breeding, aquaculture systems, and seafood supply chain management. This innovation was demonstrated in industry site visits where opportunities presented for participants to engage with world leading aquaculture practitioners.



*Grouper fingerlings produced at One Company, a private institution in collaboration with aquaculture organisations in Indonesia.*



*Participants visited Bribie Island aquaculture research facility in Brisbane.*

Although Australia's aquaculture sector is tiny by world standards, it leads in quality and value adding particularly in seafood supply chain management. Indonesia has a rapidly growing aquaculture sector: potentially the largest in the world yet it lags behind other countries in terms of economic value. It produces large quantities of shrimp, freshwater fish (Tilapia, catfish, milkfish), other valuable fish species such as grouper, barramundi, and ornamentals, pearls, and particularly seaweed.

However, aquaculture (particularly freshwater aquaculture) is concentrated in Java and opportunities to expand to other parts of the archipelago abound. Development of human resource capacity is a necessary prerequisite to this expansion. Similarly, training, education, and research are necessary to improve value adding opportunities. Accordingly, the Aquaculture Benchmarking course aims to demonstrate best practice in aquaculture relevant to Indonesia's needs.



*Dr Kate Hutson with hands-on identification of common parasites affecting fish farms.*

The program was delivered in three components including a pre-course workshop in Bandung in April 2018. At this time, the participants got to know one another, learn their particular interests in aquaculture, and develop understanding of some emerging innovation in aquaculture that would feature in the Australian program. Pleasingly, the program drew participants from Aceh to Papua with many from Eastern Indonesia. The Australian 2-week short course was held in May 2018 and was supported by a dedicated textbook "Sustainable Aquaculture for Indonesia" written by the Program Leader Professor Paul McShane. With Professor Kyall Zenger, Head of Aquaculture, James Cook University (JCU) the program received support from experts at JCU ranked number one in the world for tropical fisheries and aquaculture research/education.



*Christian Maikel, Dr Anggun Siswanto and Prof Kyall Zenger, holding a Barramundi at the Marine and Aquaculture Research Facilities Unit (MARFU), James Cook University.*



*Ir. Sari Budi Moria Sembiring, M. Biotech from Gondol Fisheries explains about the sea cucumber hatchery to the participants.*

Complementing relevant industry visits in tropical North Queensland, the on-award program also provided opportunities to engage with industry practitioners in Brisbane and Sydney. Interactive hands-on workshops drew on the world leading infrastructure and facilities at JCU (Townsville and Cairns). Participants also had the opportunity to visit and dive on the Great Barrier Reef and the Australian Institute of Marine Science. Not only was this a memorable activity visiting a world-heritage site and a world-leading marine research facility, but the visits also provided an opportunity to learn from managers about sustainable development and planning for the reef and surrounding marine environment.

The Aquaculture Benchmarking program received much media attention (television, newspapers) and regular social media coverage extended worldwide including Indonesia. The dedicated Whats App "Aquabench" remains active as does a Facebook page "Sustainable aquaculture Indonesia" with regular contributions and correspondence among course participants and presenters.



*The presentation of certificate of completion ceremony upon the Post-Course workshop closing at Sthala Hotel Ubud.*

Enduring collaboration with JCU and aquaculture practitioners and managers will be a key driver of aquaculture development in Indonesia. Collaboration with Dr Agus Sunarto an aquatic animal health

expert from CSIRO Animal Health Laboratories draws on his previous work with the Ministry of Marine Affairs and Fisheries (KKP). Other collaborations formed among participants given their shared interest in aquaculture development. This was evident when the participants presented their individual project outcomes at the final workshop in Ubud, Bali, September 2018. Collaborative interaction was a pleasing outcome given the diversity of backgrounds, interests and experience of the participants. The post-course workshop also provided an opportunity to visit Balai Gondol, north Bali where innovative approaches to aquaculture (fish, abalone, seaweed) are being developed.

Aquaculture provides a much-needed source of food security and economic prosperity particularly in eastern Indonesia where opportunities for seaweed and fin fish culture abound. More generally, Indonesia has the human and natural resources to be the world's leading provider of sustainable aquaculture product. Ongoing engagement with Australian practitioners will assist Indonesia's aquaculture development aspirations.



#### **Diana Rakhmawati**

Head of Aquaculture Legal Affairs, Cooperation and Public Relations Division, Ministry of Marine Affairs and Fisheries.

*"This short course has increased my knowledge in technological advances and regulations in the field of aquaculture applied in Australia, which I believe is very useful for achieving the goal of increasing sustainable fish production for food security."*

#### **For further information about the course, please contact:**

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