

Report of the Study Program on Marine Aquaculture and Seafood Markets in Southern China (Guangdong and Hong Kong): 2005

July 4-15, 2005

Guangdong and Hong Kong, China

Marine aquaculture is becoming an increasingly important source of seafood, with recent breakthroughs in hatchery technology for several commercial important species opening new opportunities for supply of quality products. Future demand for many marine species will increasingly be met through aquaculture production. Marine fish farming is one of the fastest growing sectors in Asian aquaculture, with demand for high value fish species such as groupers and other coral reef fishes being driven by China, the world's biggest and fastest growing market for aquatic products, including live seafood products. At the same time, China has become famous for diversified marine farming, and has evolved many new techniques and species to respond to diverse market demands.

The Network of Aquaculture Centres in Asia-Pacific (NACA), in cooperation with the Guangdong Provincial Bureau of Ocean and Fisheries, Guangdong Fishery Society, Guangdong Daya Bay Mariculture Research and Development Centre (Department of Marine & Aquatic Products, China), and the Agriculture, Fisheries and Conservation Department (AFCD) – Hong Kong SAR organized the first Study Program on Marine Aquaculture and Seafood Markets in Southern China, covering Guangzhou, Dayawan, Shenzhen, Shanwei, Raoping and Hong Kong. This study program is one of the activities of the Asia-Pacific Marine Fish Aquaculture Network, coordinated by the Network of Aquaculture Centres in Asia-Pacific (NACA).

Objectives

The Study Program took place from 4th –15th July 2005 and was intended to introduce participants to the demand side of the live marine seafood trade, and latest developments in marine fish farming and seafarming in southern China, part of the world's biggest aquaculture producer.

Specifically, the Study Program was organized to provide:

- Unique understanding of the Chinese (Guangdong & Hong Kong, the two biggest live tropical marine reef fish markets in the world) live marine seafood markets, including preferred species, market organization, market chains and market/consumer trends.
- Insight to the marine farming systems and management in southern China and Hong Kong, including major species, hatcheries, new technologies, aquaculture farming systems and trends.
- Opportunities to develop valuable business and scientific contacts with aquaculturists, buyers, traders, industry groups, and scientists.

The Study Program introduced participants from exporting and producing regions in the Asia-Pacific area to the markets and marine aquaculture in southern China. There were a total of 14 participants come from China, Hong Kong, India, Indonesia, Maldives, Marshall Islands, Philippines, and Singapore.

Hong Kong Component

The AFCD coordinated arrangements for the Hong Kong component of the Study Program. In Hong Kong, participants visited the Fish Marketing Organisation (FMO) Aberdeen and Kwun Tong Wholesale Fish Markets and special discussions were held with seafood traders and business owners to help understand the demand and price trends for various key species. Field trips were arranged to the local live seafood street and wet market at Lei Yue Mun, with side visits to floating cages and pond fish farms. Participants also had the opportunity to visit the Au Tau Fisheries Office and a briefing on Aquaculture in Hong Kong on the Accredited Fish Farm Scheme; the Fisheries Education Centre of AFCD, and Tai Lung Veterinary Laboratory for a briefing on the fish health programme and important fish diseases.

Presentations included:

- Consumption, import and export of seafood in Hong Kong (AFCD).
- Legislation related to mariculture in Hong Kong and recreational fishing scheme (AFCD)
- Biofilter project (AFCD).
- Environmental impact assessment and aquaculture (AFCD).
- Monitoring and management of red tides in Hong Kong (AFCD).
- A demonstration of the Red Tide Management Information System (AFCD).
- Asia-Pacific Marine Finfish Aquaculture Network and brief on marine finfish hatchery development in SE Asia (NACA).



Group photo at AFCD HQ with Dr Leung Siu-fai, Assistant Director (Fisheries)



Participants thank a marine fish farmer after visiting his farm, observing species farmed and farming practices



Pond fish farm at Mai Po, this area is used for farming mullet and freshwater fish species. Some farms also culture giant groupers



Special discussion dialog with the Chairman and President of the Hong Kong Chamber of Seafood Merchants Ltd., and live seafood traders and business owners



Participants visiting the Fisheries Education Centre of AFCD



Participants visiting FMO Aberdeen Wholesale Fish Market





Visit to Tai Lung Veterinary Laboratory and briefing on the fish health programme and fish diseases by Dr Brad Chadwick



Visit to Au Tau Fisheries Office and briefing on aquaculture in Hong Kong and accredited fish farm scheme



Visit Kwun Tung market and observing species and prices of various live seafood products



Live seafood wholesales store at Kwun Tong Wholesale Fish Market



Group photo with seafood traders and business owners at FMO Kwun Tong Wholesale Fish Market



Visit to Lei Yue Mun retail stalls and seafood restaurants area for tourists



Species sold at the Lei Yue Mun retail stalls and seafood restaurants area

Guangdong Component

In Guangdong, the study tour visited Huangsha Live Seafood Wholesale Market, the largest live seafood market in China, and the Yanbu Fish Wholesale Market, the largest freshwater farmed fish market in Guangdong. Special discussions were held with business owners and seafood traders to understand the requirements and demand trends of marine finfish species in Southern China. In addition, the tour visited local live and dry seafood retail streets and restaurants, including a visit to the Dongjiang Group of restaurants featuring live seafood.

Marine aquaculture activities included visits to farms producing abalone, kingfish, scallops, flat fish, groupers, tuna, snappers, as well as to marine finfish hatcheries and shrimp farms, covering Dhansui, Nan'ao, Shanwei and Raoping. A field trip was organized to the Guangdong Daya Bay Mariculture Research and Development Centre in Dhansui, which has been successful in producing various marine species such as sea urchin, abalone, groupers, snappers, seabreams and puffer fish.

The China Inspection and Quarantine (CIQ) in Shenzhen was also included in the program in order to understand the import regulations and quarantine procedures for importing live aquatic organisms into Southern China.

The overall coordination of arrangements for the Guangdong component was strongly supported by the Guangdong Provincial Bureau of Ocean and Fisheries and the Guangdong Fishery Society.



Special discussion session with senior officials of the Guangdong Ocean and Fisheries Administration, staff of Guangdong Fisheries Association and Guangdong Fish Processing and Marketing Association to understand the fisheries and aquaculture and markets trend in Southern China



Special discussion dialog with Huangsha Live Seafood Wholesale Market management team, seafood traders and business owners



Visit to the retail outlets at Huangsha market



Observing the preparation of big green grouper at Dongjiang restaurant group (one of the biggest seafood restaurant group in Guangdong)



Dry seafood products street selling various types of dry and processed seafood



Visit to retail stalls at Yanbu market



Species of grouper found in Yanbu market



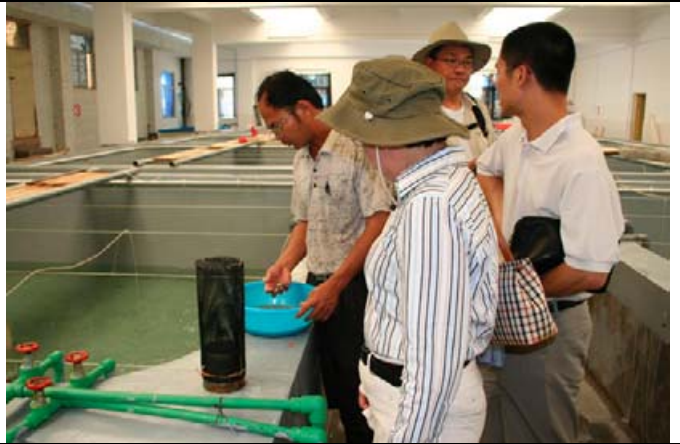
Presentation and discussion at the Guangdong Daya Bay Mariculture Research and Development Centre by Dr John Liufu and Dr Zhang Haifa



Dr John Liufu explaining the R & D activities in the Guangdong Daya Bay Mariculture Research and Development Centre



Participants looking at the grouper larvae at Guangdong Daya Bay Mariculture Research and Development Centre



Observing feeding activities at Guangdong Daya Bay Mariculture Research and Development Centre for marine finfish fingerlings



Visit kingfish farm, nursery area



Kingfish nursery and scallop grow-out farm



Technician at the kingfish farm showing market size kingfish to participants



Group photo with Vice President of Xulian Group at their kingfish and scallop farm, and also scallop hatchery



Polar cage farming kingfish



Capital intensive marine fish farm culture flat fish and grouper species



Group photo at the flat fish farm with farm owner and Shanwei Provincial Fisheries officer



*A large-scale abalone farm culturing *Haliotis aquatilis* reeve was visited by participants*



*The abalone species *Haliotis aquatilis* reeve*



Shrimp farmer explaining the farming conditions and answering participants questions



Visiting traditional floating cage farm culturing various marine finfish species including groupers, snapper, sea bream, etc.



Visit to CIQ Shenzhen and Professor Jiang Yulin explaining the activities and facilities in the center



Group photo at CIQ Shenzhen with CIQ Director and Deputy Director

Annex 1: Daily Program

Day	Activities
1.	July 3 Arrival of participants in Hong Kong and check into hotel
2.	July 4 Morning: <i>Pickup at hotel at 08:30 am</i> <ol style="list-style-type: none"> Study Program Opening at AFCD Presentation: <ul style="list-style-type: none"> Asia-Pacific Marine Finfish Aquaculture Network and brief Marine finfish hatchery development in SE Asia (presented by NACA) Discussion & Dialogue (participants and resources speakers) Visit to Au Tau Fisheries Office and briefing on Aquaculture in Hong Kong and the Accredited Fish Farm Scheme <p>Lunch (Mai Po)</p> <ol style="list-style-type: none"> Field trip to pond fish farm in Mai Po Visit to Tai Lung Veterinary Laboratory and briefing on fish health programme and fish diseases <p>Evening:</p> <ul style="list-style-type: none"> Overnight in Hong Kong
3.	July 5 Morning: <ol style="list-style-type: none"> Presentation at AFCD: <ul style="list-style-type: none"> Legislation related to mariculture in Hong Kong and recreational fishing scheme (Presented by AFCD) Biofilter project (Presented by AFCD) Environmental Impact Assessment and Aquaculture Monitoring and Management of Red Tide in Hong Kong (Presented by AFCD) Demonstration of Red Tide Management Information System <p>Afternoon:</p> <ol style="list-style-type: none"> Visit to a mariculture farm <p>Evening:</p> <ul style="list-style-type: none"> Overnight in Hong Kong
4.	July 6 Morning: <ol style="list-style-type: none"> Presentation at FMO Aberdeen Wholesale Fish Market <ul style="list-style-type: none"> Consumption, import and export of seafood in Hong Kong Visit to FMO Aberdeen Wholesale Fish Market <p>Afternoon:</p> <ol style="list-style-type: none"> Discussion with seafood traders in Aberdeen Wholesale Fish Market Visit to Aberdeen Fisheries Office and Fisheries Education Centre <p>Evening:</p> <ul style="list-style-type: none"> Overnight in Hong Kong

5.	July 7	<p>Morning:</p> <ol style="list-style-type: none"> 8. Visit to FMO Kwun Tong Wholesale Fish Market and discussion with seafood traders 2. Visit to live seafood retail outlets and restaurants in Lei Yue Mun <p>Afternoon:</p> <ul style="list-style-type: none"> • Proceed to Guangzhou by coach • Overnight in Guangzhou
6.	July 8	<p>Morning: <i>Pick up at hotel 08:30 am</i></p> <ul style="list-style-type: none"> • Visit Guangdong Provincial Department of Ocean and Fisheries • Briefing on mariculture in Guangdong province • Briefing on seafood market and marketing in Guangdong province <p>Working Lunch</p> <ul style="list-style-type: none"> • Visit Dongjiang Group of Restaurants featuring live seafood <p>Afternoon:</p> <ul style="list-style-type: none"> • Visit Huangsha Live Seafood Wholesale Market in Guangzhou city • Meeting and discussion with market management staff • Visit selected outlet/dealers <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Guangzhou
7.	July 9	<p>Day time:</p> <ul style="list-style-type: none"> • Day off - Site seeing in Guangzhou <p>Evening:</p> <ul style="list-style-type: none"> • Boat trip in Zhu Jian (Pearl River, at own cost) • Overnight in Guangzhou
8.	July 10 (Sun)	<p>Morning:</p> <ul style="list-style-type: none"> • Check out from hotel; Leave Guangzhou for Nanhai or Foshan • Visit local wholesale fish market (such as Yanbu Fish Wholesale Market) • Meet market management staff <p>Afternoon:</p> <ul style="list-style-type: none"> • Proceed to Shenzhen <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Shenzhen
9.	July 11	<p>Morning:</p> <ul style="list-style-type: none"> • Proceed to Nan'ao • Visit mariculture activities in Nan'ao (boat trip) • Finfish cage culture (conventional cages and submersible cages) • Suspended cage culture of scallops • Private mariculture R & D in Nan'ao <p>Working lunch</p>

		<p>Afternoon:</p> <ul style="list-style-type: none"> • Visit seafood restaurant and dry seafood products street targeting tourists and operated by locals • Proceed to Dhansui (Dayawan) <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Dhansui
10.	July 12	<p>Morning:</p> <ul style="list-style-type: none"> • Visit Guangdong Provincial Mariculture R & D Centre in Dayawan and facilities tour • Briefing on seed production, nursery and grow-out culture of important mariculture species in Southern China <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Dhansui
11.	July 12	<p>Morning:</p> <ul style="list-style-type: none"> • Leave Dhansui for Shanwei <p>Working lunch</p> <p>Afternoon:</p> <ul style="list-style-type: none"> • Visit mariculture site in Shanwei (grouper, turbot, abalone, shrimp, etc) • Visit local seafood market <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Shantou
12.	July 14	<p>Morning:</p> <ul style="list-style-type: none"> • Visit Raoping floating cage culture zone, briefing on fisheries and aquaculture • Visit traditional floating cage farm farming groupers, seabream, snappers, tuna, etc. <p>Afternoon:</p> <ul style="list-style-type: none"> • Proceed to Shenzhen <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Shenzhen
13.	July 15	<p>Morning:</p> <ul style="list-style-type: none"> • Visit Shenzhen CIQ (China Inspection and Quarantine) • Briefing on import regulation and quarantine procedures <p>Afternoon:</p> <ul style="list-style-type: none"> • Shenzhen city trip • Leave for Hong Kong <p>Evening:</p> <ul style="list-style-type: none"> • Overnight in Hong Kong
14.	July 16	Depart Hong Kong for Home

Annex 2: Participants list for Study Program 2005

No	Name & Address	No	Name & Address
1.	Dr Manoj Nair R. USDA Land Grant Program College of The Marshall Islands PO Box 1258 Majuro, MH 96960 Republic of the Marshall Islands Tel: +692-5283031; 5033/5034 Fax: +692-5284699; 6257203 E-mail: manojnair999@yahoo.com; manojnair@manojnair.com	8.	Dr Kandan Shanmuganathan Rajiv Gandhi Centre for Aquaculture (MPEDA, Ministry of Commerce & Industry, Government of India) 5/133 Hidayath Complex, 1 st Floor, Main Road Thirumullaivasal-609113 Sirkali Tk, Nagapattinam Dt, Tamilnadu, India Tel: +91-4364-264903 Fax: +91-4364-264204 E-mail: rgcamym_kmb@sancharnet.in; bassrgca_kmb@sancharnet.in
2.	Mr Randy Thomas Rongelap Atoll Local Government PO Box 1766 Majuro, MH 960960 Republic of the Marshall Islands Tel: +692-6253031; 5401/7271 Fax: +692-6255400; 6254667 E-mail: manojnair999@yahoo.com; manojnair@manojnair.com	9.	Mr Mohamed Shahid Sfor-zah Pvt Ltd G. Sea Wave, Huvafeene Goalhi Male' Republic of Maldives Tel: +960-777 3426 Fax: +960-315622 E-mail: shahid@sfor-zah.com.mv
3.	Mr Johannes Kembuan PT Multidata Rancana Prima Menara Jamsostek, North Tower 22 nd Floor JL. Jend. Gatot Subroto No. 38 Jakarta 12710, Indonesia Tel: +62-21-52962322; 2323 Fax: +62-21-52962201 E-mail: jkembuan@ptmultidata.com	10.	Ms Anna Maria Irianti Lukto PT Multidata Rancana Prima Menara Jamsostek, North Tower 22 nd Floor JL. Jend. Gatot Subroto No. 38 Jakarta 12710, Indonesia Tel: +62-21-52962322; 2323 Fax: +62-21-52962201 E-mail: anna@ptmultidata.com
4.	Mr Lee San Matsya Mico Aquaculture Pte Ltd 40 A Toh Crescent Singapore 507952 Tel: +65-94241925 Fax: +65-65421906 Email: s.lee@mmafarm.com	11.	Mr Khong Cheong Foo (Allan) Matsya Mico Aquaculture Pte Ltd 40 A Toh Crescent Singapore 507952 Tel: +65-97389150 Fax: +65-65421906 Email: a.khong@mmafarm.com
5.	Mr Jaime Kilayko Montalvo Aqua Sur Resources Corporation 2286 Alsons Bldg, Pasong Tamo Ext Makati City, Philippines Tel: +63-2-8152142 Fax: +63-34-4410749 E-mail: geeme68@yahoo.com	12.	Mr Rex J. Ricao Finfish Hatcheries Inc 2286 Alsons Bldg, Pasong Tamo Ext Makati City, Philippines Tel: +63-2-8152142 Fax: +63-34-4410749 E-mail: rexjticao@yahoo.com
6.	Mr Ryan Michael C. Alegre Dobe International Cavan's Resort Guadacupe Cebu City, Philippines Tel: +6332-2553736 Fax: +6332-2544011 E-mail: ryan_alegre@yahoo.com	13.	Mr I. Wajan Sudjana Sudja PT Tirtalini Perdana JL. Tebet Barat IX No. 24 Jakarta 12810, Indonesia Tel: 62-21-8313322 Fax: +62-21-8305212 E-mail: wsudjatp@indo.net.id
7.	Mr Brian Ho Aquaculture Technologies Asia Limited 10/F United Building 449 Hennessy Road Causeway Bay, Hong Kong Tel: + 852-90218199 Fax: +852-21406388 E-mail: bwcho@netvigator.com	14.	Mr Steindor Sigurgeirsson Nautilus R1801 Car Po Commercial Building 18-20 Lyndhurst Terrace Central, Hong Kong Tel: +852 62929721 Fax: +852 312 10 786 E-mail: steindor@aquafund.biz

