

The NACA Training Course for Aquaculturists in Asia and the Pacific Region

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One of the major constraints in aquaculture development identified in the 1975 Regional Workshop on Aquaculture Planning in Asia is the lack of trained personnel especially those with broad-based training and experience in the practical aspects of aquaculture production. The Network of Aquaculture Centres in Asia (NACA) was established to develop and organize training courses for developing a core group of senior aquaculturists and technicians needed for the planning and implementation of aquaculture development programs in Asia and the Pacific region.

A 12-month training course was developed by a Task Force of experts from FAO, research institutions, university professors and upon consultation with experts in the various research and educational institutions in the region.

The immediate objective of the NACA training course is to develop a core group of senior aquaculture personnel with broad-based multidisciplinary training in various aspects of aquaculture. This group will form the nucleus of trained personnel not only to assist their governments in planning, organizing and implementing aquaculture programs but also to establish personal and institutional linkages which are conducive to regional and international aquaculture cooperation and collaboration. The training course is aimed at producing approximately 25 aquaculturists a year, hopefully over a period of five years.

Course Curriculum

The curriculum covers all essential aspects of aquaculture and is detailed in the document entitled, "Curriculum for the Training of Aquaculturists in the Asian Aquaculture Network" (ADCP/REP/80/13).

The training course is heavily oriented to practicum with special emphasis on aquaculture systems that have immediate application to the region. Theoretical instruction includes lectures and group discussions which constitute approxi-

mately 20% of total contact hours while practical work which includes field surveys, laboratory work, hatchery work, and farm training, constitutes 80%. In addition to the approximately 1850 contact hours, the participants are requested to write field and laboratory reports, survey results, seminar/workshop proceedings and term papers.

Course Schedule, Venue and Study Tour

To effectively cover all the syllabi in the curriculum over a period of one year, a very tight training schedule has to be followed. The bulk of the training course is conducted at the Regional Lead Centre in the Philippines (RLCP) which is based at the Aquaculture Department of the Southeast Asian Fisheries Development Center (SEAFDEC).

The course participants are also requested to travel to Thailand, India, China and Hong Kong for a period of 10 to 12 weeks. The various lead centers at Thailand, India and China help in organizing and conducting practical training in their countries.

The field trips in the various countries are specially organized to include farming and induced breeding of several freshwater fish species; integrated fish farming; recycling of wastes; the farming of *Macrobrachium rosenbergii* and marine shrimp, as well as cage culture, polyculture, restocking and extension work.

The participants also conduct surveys of the farming practices and interviews with fish farmers, farm managers, operators, cooperative and commune officials.

Training Facilities

RLCP is well equipped with all the essential training facilities for the training course. The training facilities in the other three regional lead centers are also used

for the practical training. Modern audio-visual facilities at the various centers, reinforced with the films provided through FAO, provide the course participants ample opportunities to familiarize themselves with aquaculture related activities in other parts of the world.

Course Participants

Since the start of the first training course on 6 April 1981, a total of 36 participants from 16 countries have benefited from the program—Bangladesh, Brunei, Burma, China, Fiji, Indonesia, India, Malaysia, Nepal, Philippines, Pakistan, Papua New Guinea, Singapore, Sri Lanka, Thailand and Vietnam. The first training course had 21 participants, 20 of which graduated on 31 March 1982. The 16 participants of the second training course are still undergoing training and are expected to complete their training on 31 March 1983.

The features of the course participants are:

- diversity in educational backgrounds
- all of them have at least a Bachelor's degree or equivalent and many have a Master's degree
- they are scientists and the majority hold responsible senior positions in their country

Course participants constructing fishponds in the Philippines (*upper*). Course participants discussing *Macrobrachium* culture in Thailand with instructors (*lower*). Photos by the author.





Visiting commercial cage culture farms in Hongkong (top). Course participants visiting hatchery facilities at Pearl River Fisheries Research Institute in Canton, China (bottom). Photos by the author.

- their ages range from 23 to 45 years with an average of 32 years
- except for one participant, all have working experience of 2 to 20 years. Average working experience is 8 years; many have long research and aquaculture development experience
- the participants are predominantly males and over 85% of them are married and with children
- their eating habits are rather diversified because of different religions and cultural heritage.

Most participants are experienced aquaculturists and have specific objectives to achieve during the training. The first two months are the most crucial. Some participants have the misconception of international training as "another pleasure trip" especially those used to meetings abroad and short-term training courses. The more experienced and older participants have difficulties in adjusting to roles of trainees or students. Many have to overcome their skepticism with regard to the training and some are even apprehensive of what they could actually learn. The temporary separation from the family and the need to adjust to a new environment, climate, foods and eating habits and social

life have been a problem to some of them. Erratic emotional depressions are aggravated by late receipt of letters from their families, inconvenience in living conditions, language problems and lack of activities to fill their leisure time. It is therefore pertinent that the training be effective and have immediate impact on the recipients. A light but effective training schedule is particularly important in the initial two months. Appropriate sport facilities are also essential not only to keep them physically fit but also to occupy whatever free time they have. The day-to-day requirements must be attended to and social gatherings need to be organized to foster closer relationship among participants since some of them are too shy to interact due to cultural or religious reasons.

While it is true that the participants are adults and are able to control themselves, experience shows that once they adjust to the level of trainees or students, they exhibit some characteristics of ordinary students: they are cautious about examination marks, competitive about grades and form groups.

However, they are certainly different from ordinary students in that they are able to interact in the lecture and practicals; they can contribute positively their experience and opinions and in many ways work harder if they are convinced of the value of the training course.

The Instructors

Although the bulk of the instructors for the training course are the training and research staff of the various lead centers, a substantial number of instructors are from universities and research institutions from the region. Not less than 50 instructors are involved voluntarily in the training each year and none of them receive compensation; however, their inputs vary according to the subjects they are involved in. This is another unique feature of this training course at which senior scientists in the region have contributed to the training of fellow junior scientists.

Response

The success or failure of a training course is best reflected by the recipients. The views of the participants to the first

training course are published in their graduation Yearbook *Momentum*. The comment by one graduate sums up the general feeling of all participants: "This is the most rigid training on aquaculture with multi-disciplinary approach on all aspects. It demonstrates the capability of the Asian senior aquaculturists in imparting their expertise to their fellow aquaculturists. Linkages between the scientists of Asia and the Pacific are further enhanced. There is no doubt that a few years from now, those who have undergone this training program will form the core of aquaculture experts in the region."

They also recommended continuation of the NACA training program; funding by participating countries which benefit from their candidates' attendance; and strengthening of ties between NACA and institutions such as the University of the Philippines in the Visayas, the Philippine Bureau of Fisheries and Aquatic Resources, ICLARM and others which contribute lecturers and publications.

An encouraging phenomenon of this training course is the close relationship established between the participants and the instructors as well as among themselves. All the graduates wrote to the project within three months after their return. It was rewarding to hear that most of them are now in the forefront of aquaculture development in their countries.

Similar favorable feedbacks are obtained from the participants of the second training course while complaints of hard work, tight schedules, tough examinations and the "slave-driving" training coordinator still remain. ●

Course participants collecting broodstock for spawning in Thailand.

