



## ***HOW IT ALL BEGAN***

**I**mmediately after the Second World War, the fishing operations in Southeast Asia were limited to what were then the territorial seas limits of national sovereignty, the twelve nautical miles from shore zone. For the most part, fishing vessels did not have engines and the gear used was traditional and by today's standards was primitive. The fishing effort in those days was barely enough to meet the national demands. Even at that time a lucrative market in fish exports had been perceived and in the late 1950s many Southeast Asian nations started to increase their fishing effort. By the late 1950s, the trawl was introduced into Thailand from the West with a resulting dramatic increase in landed catch. Heavy investment in gear and boats was the natural outcome because the seas were considered as an inexhaustible source of wealth,

food and having a vast fish export potential. It was also perceived that to tap the huge marine resources potential, trained men would be needed, such that in 1967 the idea of the Southeast Asian Fisheries Development Center was conceived. As a logical extension of this, the Training Department was introduced and came into operation in 1970 to train fisheries personnel in marine fishing technology and navigation in a training course of one-year duration.

During the 35 years since its establishment in 1968 the Training Department, as with SEAFDEC in general, has gone through many variations in operation to keep pace with the changes that have occurred in industrial and coastal small-scale fishing throughout the Southeast Asian region. As the global recognition of the decline in fishery resources has become more sharply defined, so the recognition of SEAFDEC has



# The SEAFDEC Training Department in Retrospect Through 35 Years of Fisheries Development

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increased such that all member nations of ASEAN, except for the Lao PDR that has only minimal fisheries activities, have joined SEAFDEC as members of the family. Thus it is that SEAFDEC and the Training Department serves the fishery needs of 10 SEAFDEC member countries.

From the beginning, it was seen that fisheries development required fisheries training. Over the last 35 years the objective of the SEAFDEC Training Department (TD) has been to develop modern fishery technologies for the better use of marine resources. The mandate of training in such fisheries practices has not changed dramatically, however, the methods and emphases of the training have been modified to keep abreast of the demands made upon the natural fishery stocks by the extended SEAFDEC family. As the demand for fish has grown so the

technology to catch fish has developed and become more and more sophisticated to the point of evident over-exploitation of the natural stock. The consumption of fish is a source of high-grade, but cheap protein for the people, however, as stocks have become reduced and more difficult to catch so the economic return for the fishermen has become a serious problem leading to greater fishing effort to increase their economic return.

While TD was conceived in 1968, other departments pursuing different aspects of fisheries were inaugurated. The Marine Fisheries Research Department MFRD in Singapore also came into being in 1968 and its original mandate was marine fisheries research until the early 1980s when it changed its emphasis to that of Fisheries Post Harvest Technology. The foundation of an Aquaculture Department, now AQD, in the

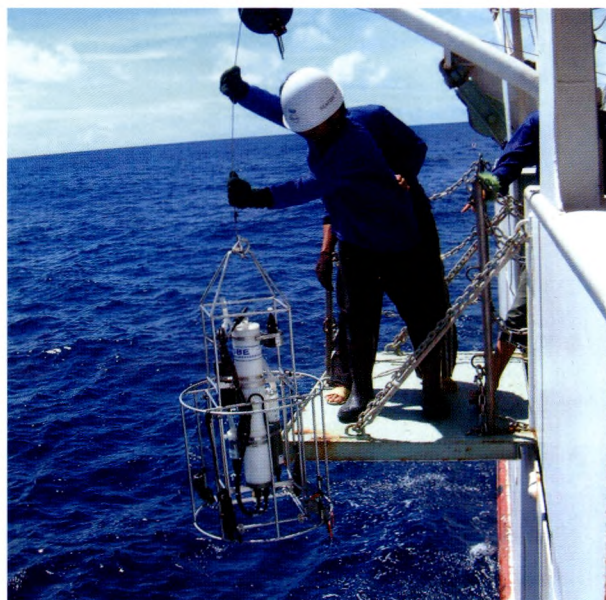
Philippines was agreed by the SEAFDEC Council of Directors in 1969, but actually commenced operations in July 1973. The last department to be inaugurated was MFRDMD or the Marine Fishery Resources Development and Management Department in Malaysia, which commenced operation in 1992. Their work focuses on the provision of assistance to member countries in the development and management of marine resources.



## ***THE WORK OF THE TRAINING DEPARTMENT***

The first training course offered in 1970 was a one-year course on marine fishing and navigation, which included science and English language studies. This course was repeated in 1971. The third training course offered in 1972 was a two-year course. It soon became evident that training courses of this duration were difficult for employers to accept and there was difficulty in selecting suitable candidates to undertake the courses. Subsequent courses were tailored by reducing the duration to 18 months. At the same time that training courses were offered the Training Department inaugurated what is now the Information & Extension Division. It started with the Library and Technical Information dissemination through its publications, over the years more than 60 have been published in the form of research papers, monographs, statistics bulletins and departmental annual reports.

In 1978, MFRD in Singapore transferred their marine research activities to TD, such research placed emphases on oceanography, fishing gear technology, fisheries resources assessment, statistics and socio-economics. Work was carried out, even in the early 1980s to design shrimp trawls that released small and undersized stock and fish. Apart from training, TD has emphasized fishing gear design and new technology and the department is now a powerhouse for change to responsible fishing technologies in the region.



Over the years, the Training Department has continued training programs for fishers, fishery officers, extension workers, marine and refrigeration engineers, navigators, statisticians and the broad range of disciplines involved in regional fisheries. As better teaching methods have evolved, the duration of the training courses has reduced and become more intensive. The use of safety and advanced electronic equipment including RADAR, side-scan SONAR, fish finding devices and all the modern accoutrements of fishing have been taught.

### ***Our most distinguished visitors***

Without doubt the visit, during July of 1999, by Their Imperial Highnesses the Prince and Princess Akishino of Japan was a highlight of great significance. Their visit to Thailand was at the invitation of the Government of Thailand on the occasion of the 72<sup>nd</sup> anniversary of His Majesty the King Bhumipol Aduldej. The Prince and Princess graciously took the time out of their busy schedules to visit the Training Department. This was not their only connection with SEAFDEC and the Training Department, in 1992, Their Imperial Highnesses presided over the launch and dedication of M.V. SEAFDEC the research and training vessel.

**Left:** *The TD Library, without this store of knowledge we should be lesser beings.*

**Top:** *The quest for sea-truth through research is constant.*

**Top (next page):** *Their Imperial Highnesses, Prince and Princess Akishino record their visit.*

**Right:** *M.V. SEAFDEC, the technology and research vehicle.*

**Top right:** *The dormitory, a home from home.*

*The new Fishing Workshop.*

*The simulator takes the guesswork out of fishing without seasickness.*





The Secretary-General presented Their Highnesses with a short report and a token of deep appreciation before they signed the special guest book.

***TD facilities and research and training vessels.***

From the very beginning SEAFDEC has had the practical aspects of fisheries very much in mind and has been lucky with its offices, dormitory and workshops. Sited on the edge of the urban sprawl that is Bangkok and on the Western bank of the Chao Phraya River, near the mouth. TD is ideally situated for berthing its research and training vessels and provides a model environment for the trainees attending the courses. The first vessel acquired was M.V. Paknam, a stern trawler donated by the Japanese Government for TD to carry out its shipboard training programs, she served valiantly, if not adequately, until she was replaced by M.V. SEAFDEC in 1993, again through the great generosity of the Government of Japan. This elegant and excellently equipped vessel serves as both a training ship and a platform for detailed and advanced oceanographic and fisheries research. At 1,200 tons this vessel is the mainstay of the SEAFDEC fleet, which is augmented by M.V. Platoo a glass fibre vessel used for inshore research and training. The last of the working vessels is M.V. Plalung a locally built trawler, used by TD for training in Purse Seine deployment. These last two vessels are now becoming quite old and although they have been maintained with loving care



they have passed the end of their useful life. It is expected that these two vessels will be replaced by a single vessel of about 200 tons, which will be employed in the drive toward sustainable coastal fisheries and for inshore research, however, she will also be more capable than Platoo and Plalung for work in deeper waters.

The various buildings at TD are very adequate for conducting training courses in both lecture rooms and workshops. Separate from the main building complex are the marine engineering workshops and an in-house printing room. There is a new building, finished in 2002, comprising a new net loft for the design and manufacture of fishing gear, a flume tank for testing gear design in water flow conditions, a research laboratory and the Ship Division. There are also offices for the Research Division



and offices for the embryo, but not yet established coastal fisheries management section. In the main building the Administrative Division is housed together with the Information and Extension Division, the excellently equipped Audio-Visual Section and the Training Division. Also in the main building are the offices for the vital Finance Division and the offices of the Secretary-General and his Deputy. The Library with several thousand technical books, periodicals and journals is sited close to the main building.

There is a dormitory for the trainees including a canteen, fitness room and recreational areas. For ceremonies and celebrations a multi-purpose building is sited in the spacious gardens near the tennis courts.

Among the training aids there is a very high tech fishing simulator that includes state of the art equipment to set up through computer control many situations that can occur in fishing operations.

## ***TRENDS THAT HAVE INFLUENCED THE DEVELOPMENT OF TD***

The international trend to allow greater national control over fisheries resources culminated in the implementation of the United Nations Convention on the Law of the Sea initiative, which is the 200 nautical mile "Exclusive Economic Zone". This extension of national sovereignty was recognized as a major development in fisheries. It had the effect of localizing the Training Department efforts to address the coastal fisheries problems and the socio-economic conditions of the fishing communities. Thus, it is that the emphasis of the training courses has changed and while training in responsible fishing technology continues, these have been augmented by training courses for extension officers. In extension training, much attention is being given to socio-economic conditions and the need for an improvement in the standards of living for the fishing communities and the alleviation of poverty.

Another trend that has affected the activities of the Training Department is that close attention is given to national and regional fisheries policy changes with a clear observation on cause and effect. While it is well recognized that fish stocks are in a very depleted state, only in very recent years have national policies taken note with activities, either to devolve national governmental authority to more local control, or that national policies have strengthened, demonstrating a more determined will to manage their fisheries. These conditions have led the Training Department into many collaborative activities with wider international implications and diversified technical skills and knowledge. From the earliest days collaborative work was undertaken with the various regional departments of fisheries, with ESCAP and the Directorate of Fisheries of Vietnam, and this was long before Vietnam became a

member nation of SEAFDEC. Other collaborative efforts continued with ICLARM, the FAO/BOBP program and up until today these continue, the latest being work in Indonesia and the Philippines with the FAO/GEF project in conjunction with the Departments of Fisheries in those two countries. These international collaborations are now regularized in Memoranda of Understanding with prominent seats of university learning in Thailand, Japan, Canada and Australia. There is now a very close cooperation and affinity with FAO in Rome. All of these have the tendency to allow the Training Department to adopt a more holistic approach to the difficulties of managing the multi-species environment typical of tropical fisheries. Of particular note in the collaborative field has been the ASEAN-SEAFDEC link through the Fisheries Consultative Group (FCG). This allows SEAFDEC to have a direct voice in the fisheries affairs of the region and to gain an even closer appreciation of the fishers problems and difficulties.

Consonant with the advance in program status, in 1999, the Training Department undertook the drafting of Regional Guidelines that supported the FAO Code of Conduct for Responsible Fishing Operations. The FAO Code is a generic document for fisheries and is applicable both to mono-species and to tropical fisheries environments. Using the technical expertise vested in the department and following the approval given by the Council at the 30<sup>th</sup> Council Meeting the Regionalization of the Code of Conduct for Responsible Fisheries was completed. An abstract of the process is given here:

The thirtieth SEAFDEC Council meeting fully approved and supported the program for the Regionalization of the Code of Conduct for Responsible Fisheries. In response to the approved policy decision by the Council, SEAFDEC implemented a course of action aimed at achieving a Regionalization of the Code of Conduct for Responsible Fisheries (RCCRF) with the objective of securing sustainable fisheries in the region.



The department identified the “RCCRF Phase I: Responsible Fishing Operations” as falling within our skills, in-house expertise and training mandate and having identified active Fishing Technology Experts within the region the process of achieving an RCCRF started.

By conducting a series of meetings involving, in the initial stage, the identified core-experts, a pre-meeting was held followed by a full consultation of over 50 regional fisheries technology experts and finishing with a post-meeting of the core-experts, a completed set of Regional Guidelines for Responsible Fishing Operations supporting an RCCRF was achieved. The post-meeting also defined and interpreted Plans of Action leading to promoting political acceptance of the Guideline principles and their implementation within the region.

In March 1998, the SEAFDEC Council of Directors at the Thirtieth Meeting of the Council, in Bandar Seri Begawan, Brunei Darussalam produced a **Resolution on the SEAFDEC Strategic Plan** wherein the following extracts particularly highlight the future direction of the Training Department:

- *Affirming* that an effective and integrated approach to fisheries with due emphasis on those for coastal fisheries will result in a long-term and significant gain in food supply, income and wealth, as well as in economic growth.
- *Also affirming* that the question of fisheries resource sustainability needs to be addressed adequately because Asia still depends heavily on fish as a source of animal protein, and that fisheries development provides a firm guarantee for the continued availability of a dependable food source that must be safely secured.

- *Recognizing* that SEAFDEC is ready to play a role as a regional collaborative platform for all its member countries and other Southeast Asian countries
- *Reaffirming* that the commitment of SEAFDEC towards closer working relations, collaboration and cooperation with ASEAN for sustainable development.
- *Also recognizing* that the multi-discipline approach appears to be most effective in solving the fisheries problems.

**Resolve** that the following strategies could be used as guides to realize the goal set by the SEAFDEC mandate:

#### Strategy

- Placing emphasis on regional issues and anticipated external problems.
- Promoting efficient and sustainable uses of fisheries resources.
- Facilitating intra-regional exchanges of expertise and information.
- Strengthening mechanisms for regional collaboration.
- Avoiding duplication of efforts.
- Increasing the visibility of SEAFDEC activities.

### A MOST SIGNIFICANT LANDMARK

The greatest single event that has created change in the direction of SEAFDEC with connective effect on the Training Department was the magnificently successful ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security in the New Millennium: “Fish for the People”. The conference was convened in Bangkok in November 2001 and was a collaborative venture between the Association of Southeast Asian Nations (ASEAN) and SEAFDEC in conjunction with the Food and Agriculture Organization of the United Nations (FAO) and having magnificent support from the Government of Japan. The conference was hosted by the Department of Fisheries of Thailand and had the multiple objectives of reviewing the regional situation of fisheries, analyzing the problems to be faced and formulating policies and strategies to achieve the sustainable management of Southeast Asian fisheries. The Millennium Conference covered all aspects of fisheries from aquaculture through deep-sea to international agreements. There were some 800 delegates and participants taking part in



*Our effort today is to work on great things together and the rewards are: “Fish for the People” tomorrow.*



the conference and their deliberations culminated in several important resolutions and plans of action.

The future planning for the Training Department, planning was encapsulated in the **SEAFDEC 5-year Conference follow-up program**.

The emphases for the Training Department tend away from the training on capture fisheries toward training on coastal fisheries management. However, the implications of the FAO Code of Conduct for Responsible Fisheries are still very much on the future agenda.

The overall SEAFDEC/TD program encompasses the following:

1. Toward Decentralized Management for Sustainable Fisheries in the ASEAN Region
2. Improvement of Fishery Statistical Systems and Mechanisms
3. Responsible Fishing Technologies and Practices
4. Resource Enhancement
5. Identification of Indicators for the Sustainable Development and Management of Capture Fisheries in the ASEAN Region
6. Information Gathering for Capture Inland Fisheries in ASEAN Countries

The TD activities under the 5-year plan are clarified as being in:

- Responsible fisheries technology
- Resource enhancement
- The exploitation of underutilized species
- Statistics as a means of stock assessment
- Coastal fisheries management

In the current work on Responsible Fisheries Technology the emphasis is on selective fisheries and to some extent in conjunction with the protection of endangered species. This work is being conducted in a collaborative atmosphere and features two devices that have the potential of being selective in terms of size of individual fish. The first device designed a couple of years ago was in response to the ban on the import into America of shrimp using gear that

offered no protection for turtles. This American derived imposition gave rise to the TED or Turtle Excluder Device. TD improved upon devices designed in Mexico and produced its own TTFD, the acronym standing for the Thai Turtle Free Device. This design is eminently successful and is being demonstrated and implemented in the countries where the by-catch of turtle is prevalent. The TED was followed by a design that intends to solve a much more difficult and complex problem, that of releasing juvenile and immature fish of a targeted species. Unless juveniles and immature fish can be released, the problem of over-exploitation becomes self-perpetuating. Thus, using the vast amount of technical expertise available at TD a device known as a JTED has been created. The JTED, or Juvenile and Trash Excluder Device when installed in a trawl is a mechanical device to separate and release alive, juveniles from the targeted catch. The device will also separate out detritus and plastic materials very often found while fishing, particularly in coastal areas and environments. A collaborative project is presently underway under the FAO/GEF project and the Departments of Fisheries in Indonesia and the Philippines to demonstrate and improve the design of such devices.

Under the banner of Resource Enhancement, The Training Department is working collaboratively with the DOF, Thailand, on artificial reefs and habitat improvement for the depleted species in the coastal zones. One purpose of this project is to determine if certain species of fish have a preference for a particular type of artificial reef leading to selective and specific species habitat improvement for recruitment and development.

Apart from fisheries training the only real deep-sea activity being undertaken by TD is an investigation to identify underutilized species. The present targets, there may be others later, are squid and species of deep-sea or neritic



tuna. It is certainly possible that this study will also identify hitherto un-exploited species of edible fish, flora and fauna.

The use of statistics in stock assessment in more visible environments is well known, but the use in stock assessment in an obscure and abstruse environment like fisheries is a horse of a very different colour. Work is presently being done in this field and that work is supported by collaboration in workshops and other activities with FAO. If the magnitude of decline or rehabilitation of the widespread fisheries scene can be measured, that is a huge step forward in solving or regulating problems or management. This ongoing work is one of the features of the 5-year follow-up plan. The abstruse and esoteric technologies being developed through computer programming and the visible landings of fish on the fish-dock hold promise of measuring stock levels. In the past, the making of assessments of stock levels was like a blind man in a dark room looking for a black cat that's not there, now high-tech solutions are being found through computers and remote sensing technologies.

The last feature for the present and the immediate future is the study on coastal fisheries management. This in-depth study includes the effect and implementation of devolved authority from central government to local levels, the reasons why fishing effort is so high and is so prevalent, the socio-economic effects of decline in coastal fisheries stocks, the identification of alternative sources of income for fishers and their families and the alleviation of fishing community poverty. A pilot project in conjunction with the DOF, Thailand, is being undertaken in a province in the south of the country. The work entails a deep study of the socio-economic environment and the market pressures that predicate the law of diminishing returns on the coastal fishing communities within the whole Southeast Asian region.

The increased national and regional visibility of SEAFDEC, and with it, the Training Department, has given cause for some hope in restoring the natural fisheries resources of the region. The application of even more advanced technology in resource level assessment and resource catch selectivity and preservation are the watchwords of TD activities. The objective now, is not to catch as much as possible, but to leave the little ones behind and alive for tomorrow. The subject of fish is both emotive and political, and apart from the present trends in budgetary constraint the apathy of the general public toward environmental degradation and the less than positive will and determination of some governments to ameliorate the conditions of their fisheries are major strictures that limit the application of remedial action. Although SEAFDEC is an inter-governmental organization it does not have, nor can it exercise, executive authority and may only advise member nation governments on ways and means to improve their fisheries situation. It is subject to the will and determination of regional governments as to whether the advice offered is adopted.

*Thus it is that TD, although beset by budgetary constraints and pressures to advance the understanding of fisheries problems and working within the 5-year SEAFDEC follow-up plan are mobilizing their wealth of expertise to find ways and means to achieve "Fish for the People". Although this is a brief review of thirty-five years of Training Department work in gaining knowledge and experience, the past is far less important than the future.*



**Top left:** The inauguration ceremony of the conference.  
**Bottom:** A sunset over the coastal village, embracing the hopes and dreams of the fisherfolk. Since time coming, the plentiful marine food supply and the flourishing of coastal fisheries have provided the fisherfolks with sustenance and economic base