



SEAFDEC NEWSLETTER

VOLUME 34 NUMBER 3 July - September 2011

BANGKOK, THAILAND, ISSN 0857 - 233X

SEAFDEC convenes Inception Workshop to prioritize activities under new decade Plan of Action

On 4-5 July 2011, SEAFDEC organized the Inception Workshop on Follow-up Activities to the ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security towards 2020 at Jasmine Hotel in Bangkok, Thailand. The workshop aims to enhance the awareness of ASEAN-SEAFDEC Member Countries, relevant agencies/institutions/organizations and donors on the Resolution and Plan of action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020, which was adopted at the ASEAN-SEAFDEC Conference's Ministerial and Senior Officials Sessions held in June 2011. The workshop also reviewed the existing activities undertaken in the region in line with the Resolution and Plan of Action. Moreover, the workshop also facilitated the incorporation of



Participants of the Inception Workshop to follow-up the ASEAN-SEAFDEC Conference

the needs and requirements of the ASEAN countries in the planning and implementation process of activities by concerned agencies/institutions and organizations.

The two-day workshop identified the priorities, gaps and programs that could support the implementation of the Resolution and Plan of Action,

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SEAFDEC Secretary-General attends the ASEAN Maritime Forum

SEAFDEC Secretary-General, Dr. Chumnarn Pongsri, attended in the Second ASEAN Maritime Forum on 18-19 August 2011 in Pattaya, Thailand. The Workshop aims to identify, discuss

and gather views on wide aspects of maritime-related issues including maritime security in order to improve transparency and enhance future cooperation on these issues.

During the Forum, Dr. Chumnarn presented a paper on the "Role of SEAFDEC in Promoting Maritime Security in Southeast Asia". In the presentation, he outlined the activities undertaken by SEAFDEC in supporting the development of sustainable fisheries in Southeast Asia, specifically those in close collaboration with ASEAN, e.g. the programs and activities under the FCG/ASSP Mechanism and the activities that contributed to the ASEAN Fisheries Consultative Forum (AFCF). While the forum emphasized most of the discussion on wide aspects of maritime security, such as the territorial waters' boundary, naval arms modernization, sea lanes of communications, trans-



The Second ASEAN Maritime Forum held in Pattaya, Thailand

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EDITORIAL

During the quarter, SEAFDEC convened an “Inception Workshop on Follow-up Activities to the ASEAN-SEAFDEC Conference” to follow-up the outputs from the recently organized ASEAN-SEAFDEC Conference, and identify immediate priorities that need to be undertaken by concerned agencies and institutions in line with the “Resolution” and “Plan of Action” endorsed at the Conference.

Several activities were also embarked by SEAFDEC to address the priority and needs of the region in combating IUU fishing, *e.g.* through enhancing the awareness and understanding among countries on the issues and status of IUU fishing in the region, and promoting systems that could contribute to combating IUU fishing such as vessel registration and monitoring/recording of catch. Various fora were also arranged for Member Countries to discuss the status, issues and challenges relevant to a number of commercially-exploited aquatic species, namely tunas, sharks, as well as other species under international concerns. While the need for coordinated position on the issues among countries in the region are expressed; there is also urgent need for countries to improve the data collection on the respective species as prerequisites in coming up with data and information that could be used as a basis for development of such position and future management of the species.

As HRD has been identified as one of the priority areas that are required to ensure sustainable development of fisheries of the region, SEAFDEC also strengthened its capacity building activities to provide better services to Member Countries. Several HRD activities were conducted, not only on the conventional subjects, but also on newly emerging issues/concepts, including the IUU fishing and ecosystem approach to fisheries and aquaculture.



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SEAFDEC convenes Inception Workshop to prioritize activities

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which were adopted during the ASEAN-SEAFDEC Conference. The Workshop participants were divided into 3 groups: i) Aquaculture; ii) Marine and Coastal Fisheries Management; and iii) Inland Fisheries Management to discuss and come up with recommendations that are dove-tailed towards the sustainability of these sub-sectors.



The conclusion and recommendations from this Inception Workshop were disseminated to all Member Countries, SEAFDEC Departments and other relevant regional/international organizations; and it is envisaged that various aspects of the recommendations

would be extracted and used in the planning and formulation of activities to assist the ASEAN Member Countries in achieving sustainable fisheries for food security towards 2020 as targeted by the 2011 Resolution and Plan of Action.



SEAFDEC Secretary-General attends the ASEAN Maritime Forum

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national crime and piracy, impacts from natural climatic disasters; Dr. Chumnarn identified and addressed other dimensions particularly the need to improve safety at sea and working conditions of fishers and crews, as well as to enhance the contribution from fishery resources to food security and well-being of people in the region. He then offered the possible collaboration of SEAFDEC, particularly in capacity building in

the areas of fisheries management for sustainable fisheries and food security, safety at sea of small fishing vessels and crews, and dissemination and exchanging of information on the status of the fishery resources and its potential as obtained through the conduct of resources surveys in order to pave the way towards improved livelihoods of the region’s fisheries communities and people in the future.



Secretary-General takes part in the Marine Fisheries Seminar in Thailand

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and emphasized in particular the urgent need to improve on-board fish handling in order to enhance the quality of catch and economic returns to fishers, while optimizing the harvest of resources in a long-term basis.

Dr. Chumnarn also served as one of the panelists in the discussion on the use of larger mesh-size in fishing operations. He reiterated the need to practice responsible fisheries in line with the CCRF, which was developed by FAO and further regionalized by SEAFDEC. However, regulation of mesh-size

should be considered as only one of several measures that could contribute to responsible fishing practices, and should be regulated/practiced incorporating other factors, *e.g.* the development of gears and how the fishing operations are conducted. He stressed that as some of the research data and technologies on this subject area are already available, focus should therefore be placed on how to enhance understanding and cooperation of fishers on the use of gears with suitable mesh-size to ensure sustainable utilization of fishery resources.



DOF Thailand holds workshop to attune Thai shrimp industry with emerging challenges

Shrimps and shrimp products are one of the important agricultural commodities of Thailand, generating incomes of approximately THB 80,000-100,000 million annually, of which 90% of the products are exported. Considering the importance of the country's shrimp industry, the Department of Fisheries Thailand convened a Seminar Workshop on "Driving the Thai Shrimp Industry under Emerging Socio-economic and Environmental Challenges" on 8 August 2011 at the Sofitel Centara Grand Bangkok Hotel, Thailand. The Workshop aims to brainstorm on views and inputs from relevant stakeholders and reconcile the Thai shrimp farming industry in response to the changing situation. The Workshop was officiated by H.E. Mr. Theera Wongsamut, Minister of Agriculture and Cooperatives of Thailand, and was attended by representatives from DOF Thailand, relevant private sectors, and representatives from international/regional organizations including FAO, INFOFISH and SEAFDEC.

The workshop started with an introductory presentation by Ms. Fatima Ferdouse from INFOFISH on "Emerging Issues in Shrimp Aquaculture and Trade" addressing the global situation and issues that may impact shrimp industry, particularly the impacts of climate change, issues on animal health and disease outbreaks, market requirement

particularly for traceability of products which results in increasing shrimp price. She also outlined the situation of shrimp trade in various major markets including the EU, USA, Japan, East Asian markets, as well as those of developing countries which are envisaged to become important food markets in the near future. The demand could be particularly increased for processed or ready-to-cook shrimps that are affordable for consumers.

Another introductory presentation on "Climate Change and Implications for Shrimp Culture in Thailand" was made by Dr. Simon Funge-Smith from APFIC. He outlined the causes and impacts of climate change, and stressed the vulnerability of the ecosystem particularly of the Asian region. While noting that shrimp production generally generates low GHG compared with other food production systems, shrimp is generally not "low carbon producer" product. Thus, shrimp production could still be improved in order to upgrade its energy efficiency, and branding of the products could be initiated to demonstrate low carbon generation.

While stressing that as shrimp production in many cases is practiced with poor management scheme, he emphasized that appropriate adaptation of shrimp industry should be considered as "no-regret strategy" in order to improve the farming system and cost/

energy efficiency, which would benefit farmers, whether or not there are any impacts from climate change.

Plenary and panel discussions were then made on several issues, challenges and opportunities for shrimp aquaculture, e.g. improving farming system at all levels in order to improve production, increase energy efficiency, reduce operation cost, enhance quality and traceability of products that are required by import markets; enhancing contract farming to minimize risks to farmers; and promoting farm cluster in order to enhance the production, increase efficiency, improve branding, and ensure the production volume meets the requirements (especially for niche markets); improving financial support, e.g. capitals and credits from private financial institutions for farmers with good farming practices, and marketing systems (also through established clusters) to minimize cost and enhance efficiency of the production system; promoting domestic market for shrimps and shrimp products; as well as enhancing support from governmental sector in creating cooperative framework among concerned sector, supporting rules and regulations, as well as providing enabling investment environment, in order to ensure the growth of country's shrimp production in a sustainable manner. ❖

AQD packages a new course on resource enhancement

For the first time, AQD offered the "International training course on community-based resource enhancement in the Southeast Asian coastal region". Supported by the Japanese Trust Fund, this course was held on 12-18 July 2011 with participants from Cambodia (1), Myanmar (1), and the Philippines (3). The trainees were introduced into the proper management and identification of strategies to rehabilitate the fisheries resources of threatened and over-

exploited species due to the changing environment and mismanaged human activities.

Resource persons were invited from Kyoto University, Japan; University of San Carlos, University of the Philippines Diliman and AQD in the Philippines. Since 2004, the Japanese

Trust Fund has initiated at AQD a project on stock/resource enhancement of internationally threatened and over-exploited species in the region. ❖



DEPARTMENTAL ACTIVITIES

New AQD publication



“Health management in aquaculture” is a 316-page textbook edited by Gilda Lio-Po and Yasuo Inui. Chapters include the major diseases of cultured fish & crustaceans, as well as diagnostic techniques and prevention & control methods for these diseases. New chapters on histology, probiotics, and epidemiology were added in this second edition. ❖

TD conducts survey on socio-economic of fishers

From 30 August to 3 September 2011, SEAFDEC Training Department in collaboration with the Bureau of Fisheries and Aquatic Resources (BFAR), Philippines conducted the survey on socio-economic of fishers in Zambales, Philippines.

This activity was part of the project on Promotion of Right-based Fisheries and Co-management Towards Institutional Building and Participatory Mechanism for Coastal Fisheries Management. The survey aims to review the status of small-scale fisheries in Southeast Asia, particularly on problems, needs and environmental impacts to fishers.

TD staff conducting socio-economic survey in the Philippines

Two staff of TD and three of BFAR took part in the survey by obtaining information from 5 selected municipalities in Zambales, Philippines. Zambales is located in the western coast of Central Luzon facing the South China Sea. The results of survey would be analyzed and used as primary information/data for planning and development of future project activities. ❖



University students visit TD

Students from Kochi University, Japan and Kasetsart University, Thailand visited SEAFDEC Training Department on 19 and 20 August 2011, respectively.

On 19 August, Mr. Kenji Matsumoto, SEAFDEC Deputy Secretary-General gave a warm welcome and made introductory presentation on roles and mission of SEAFDEC to four lecturers and 27 students from Kochi University of Japan. After the presentation, the group visited TD facilities such as the fishing workshop to observe the model of commercial and traditional fishing gears, modern fishing gear technology and fishery resource conservation tools such as Turtle Excluder Devices (TEDs) and Juvenile and Trash Fish Excluder Devices (JTEDs), engine simulator room and equipment on-board the M.V.

SEAFDEC. Moreover, study trip was conducted to visit organic shrimp farm in Samut Prakan Province.

On 20 August, two lecturers together with 59 students from the Faculty of Fisheries, Kasetsart University of Thailand also visited TD. Presentation was made on the roles and functions of SEAFDEC, including VCD on Thai Fishing Boats in order to give students a better understanding on various types of fishing boats in Thailand. The group also visited TD facilities such as Fishing Workshop to observe the fishing gear models, modern fishing gear technology, as well as

TED and JTED models. Moreover, they also visited the M.V. SEAFDEC and M.V. SEAFDEC 2, and then embarked on a Payoon boat to undertake study on ecology of estuarine, fishing boats and fishing operation around the Chao Phraya River. ❖



University students visiting the facilities of TD

AQD improves curriculum in abalone course

AQD made changes to its international training course on “Abalone hatchery and grow-out” by adding a new lecture topic and new practical activity. These are on: i) Food safety in abalone production & processing; and ii) Planting of seaweed, respectively. The improved curriculum was used during the course conducted on 7-27 July 2011 in Iloilo, the Philippines, which was attended by trainees from Cambodia, Thailand and the Philippines.

AQD also held a course on “Tilapia hatchery and grow-out” from 15 to 19 August 2011 with three participants from Malaysia, the Philippines and Korea; while a student from Belgium enrolled in the aquaculture internship program from 11 July to 21 August 2011.



Training course on Abalone hatchery and grow-out

M.V. SEAFDEC 2 finishes her mission in Brunei Darussalam waters

On 24 July 2011, the M.V. SEAFDEC 2 completed her mission in conducting fishery resources survey in Brunei Darussalam waters in collaboration with the Fisheries Department of Brunei Darussalam.

From 8 to 21 July 2011, TD researchers and crews on-board the M.V. SEAFDEC 2 undertook resources survey in collaboration with the Fisheries Department of Brunei Darussalam in Zone 2, located 3-20 nautical miles off the coast of Brunei Darussalam. The study focused on obtaining information on fishery resources in the trophic levels as well as in undertaking of scientific verifications on the impact of fishing

gears and methodologies on marine environment. In addition, this activity also aims to strengthen and update information on effective resources management as well as provide training opportunity to the researchers of Brunei Darussalam in the undertaking of marine fishery resource survey.

During the same occasion, on 21 July 2011, the Minister of Industry and Primary Resources paid his visit on-board the vessel to obtain an overview on resources survey methodologies, and observe



Activities on fishery resources survey on-board the M.V. SEAFDEC 2 in Brunei Darussalam

research activities such as oceanographic surveys, trawl fishing, and navigation activities.



AQD celebrates 38 years of aquaculture R&D

On 8 July 2011, AQD celebrated with honored guests BFAR National Director Atty. Asis Perez and DA Assistant Secretary Hon. Salvador Salacup who both expressed their institutions' and the Philippine government's support to AQD. During anniversary week, AQD Chief Dr. Joebert Toledo led the staff in welcoming industry stakeholders to a “Technology lecture series”, the DK Villaluz Memorial Lecture (delivered by Dr. RM Coloso), the launching of books & institutional repository, and the live auction of paintings.



SEAFDEC- Sida project organizes On-site Workshop

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One-day field trip was also arranged for participants to visit various places in Ranong, namely: the Ranong Biosphere Reserves, including Ranong Mangrove Research Center; the Mangrove Forest Resource Development Station in Kapoe District; the community-based resources enhancement activities in Kapoe District, where mangrove rehabilitation site and crab bank were successfully established. Participants also visited Laem-Son National Park, embracing mangrove forest and other coastal habitats, where discussion was made on various

conservation and management activities undertaken in coordination with relevant local institutions and communities.

During the trip, participants had shared their views, knowledge and experiences relevant to the roles and functions of local communities in management of fishery resources and combating IUU fishing; as well as on ways and means to further strengthen their roles and functions for better management of resources in the future.



Secretary-General takes part in the Marine Fisheries Seminar in Thailand

The Department of Fisheries Thailand convened a Seminar under the theme “Sustainable Marine Fisheries Development to Restore Fishery Resources” on 22-26 August 2011 in Nakorn Phanom Province, Thailand. The Seminar was attended by researchers of DOF Thailand, representatives from fisheries associations as well as other relevant organizations/institutions including SEAFDEC. The presentations and discussions covered wide aspects of activities and approaches to ensure sustainable utilization of marine fishery

resources, including the possibility and practicality of the establishment of closed season in the Gulf of Thailand, the opportunity for far sea fisheries development, spatial consideration for coastal fisheries management, regulating mesh-size to enhance sustainable fisheries, and the implementation of



the DOF Master Plan for Thai Marine Fisheries both within and outside the Thai EEZ.

During the Seminar, the Secretary-General of SEAFDEC, Dr. Chumnarn Pongsri, made a presentation on the roles of SEAFDEC in marine fishery researches. While addressing the necessity for basic researches, applied researches as well as researches undertaken in response to *ad-hoc* and emerging issues of the region, Dr. Chumnarn reiterated the SEAFDEC direction of marine fishery researches, e.g. the conduct of resources exploration and surveys, participatory approach for fisheries management, resources enhancement, marine aquaculture development, enhancing energy efficiency and reducing the use of manpower in fishing operations, enhancing quality of catch by improving on-board handling technologies, improving food safety, adding value as well as improving marketing and trade of fish and fishery products. He underlined the need for planning of marine fishery research in order to come up with holistic approach in ensuring sustainable utilization of the resources,



Dr. Chumnarn during his presentation (top); and group photograph with senior officials of the DOF Thailand (above)

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AQD reviews Japanese Trust Fund programs, fleshes out its thematic R&D priorities

From 3 to 5 August 2011, AQD reviewed its regional programs funded by the Japanese Trust Fund. These programs, including 25 studies/activities, are on i) resource enhancement; ii) promotion of sustainable practices; iii) food safety; and iv) fish health management.

AQD Deputy Chief and Japanese Trust Fund Co-Manager Dr. Teruo Azuma expressed his appreciation to the study leaders, technical assistants and other project personnel for keeping the programs on track and for helping critique each other's work.

Furthermore, AQD scientists, study leaders and senior officers held a series of meetings to flesh out its thematic R&D priorities. The meeting on 15 to 19 August 2011 consolidated the results of AQD's commodity-based programs; the one from 22 to 26 August 2011 drafted the list of studies, proponents and activities for 2012 as well as a broad plan for 2013-2016 based on themes; and the last one held on 6-9 September 2011 was the “In-house strategic planning and review”. All three were held in Iloilo, Philippines. ☒

AQD shares expertise

AQD scientist Dr. Relicardo Coloso attended the 2011 Aquaculture stakeholders' strategic planning meeting organized by United Soybean Board (USB) and US Export Council on 24-26 August 2011 in Kona, Hawaii, USA. His trip was supported by USB which has a collaborative project with AQD on the use of soybean meal and soy protein concentrate in aquafeeds. On the other hand, AQD Chief Dr. Joebert Toledo made a presentation on “Sustaining productivity in fisheries and aquaculture in a changing climate” at the “World conference on science & technology” held on 13-14 September 2011 in Manila, Philippines. ☒

Learning exchanges among Japan, Philippines and Belgium

AQD associate scientists Dr. Frolan Aya and Dr. Ma. Michelle Peñaranda are in Japan participating in the “Advanced program to foster young and female researchers from Southeast Asia in sustainable fisheries sciences” from 31 August to 5 October 2011 at the Faculty of Fisheries Sciences, Hokkaido University. Dr. Aya and Dr. Peñaranda are conducting their researches on silver therapon and bacteria-derived enzymes, respectively. AQD technical assistant Ms. Haydee Rose Dumarán, meanwhile, is back after participating in the “Fish/shrimp histopathology” course at Mie University from 20 July to 10 August 2011. She was funded by Marino-Forum 21, a Tokyo-based organization supported by the Fisheries Agency.

In return, AQD was visited on 25 August 2011 by 13 students from Hiroshima University and on 31 August 2011 by four faculty & students from Tokai University & University of Tokyo. Mostly in BS Agriculture and BS Biology programs, the first group made the trip as part of their study tour funded by JICA. The students in the second group stayed two more weeks for an internship at AQD.

Two of AQD’s associate researchers Mr. Joseph Leopoldo Laranja and Ms. Gladys Ludevese left at the end of September 2011 to pursue doctorate degrees

in Ghent University, Belgium. Their scholarship grants are from BOF (funded by Ghent University) and VLIR-UOS, and are “sandwich-type” programs where their studies will be conducted first in Belgium then in AQD and back to Belgium. ❖



Japanese students visiting AQD

AQD: a fish kill forum, an exhibit, a media agreement

AQD and the University of the Philippines organized a “Fish kill forum” on 5 August 2011 in Quezon City, Philippines to address the problem of mass fish kills that have occurred in Philippine lakes & coastal waters and to establish a system of accountability for the management and utilization of aquatic resources. Representatives from the academe, government agencies, LGUs and private sector attended while PCAMRD and BFAR gave financial support.

AQD was also in Davao City for the “1st Vis-Min Davao Agri-Aqua Expo” held 11-13 August 2011. Further, AQD signed an agreement with the Foundation for Agriculture-Related Missions (FARM) Inc. on 12 September 2011 to showcase AQD’s mature technologies on both marine and freshwater aquaculture species. FARM produces “Mag-Agri Tayo” – the television show in Filipino that features agriculture and aquaculture technologies. ❖



AQD and the University of the Philippines organized “Fish kill forum”

TD promotes SEAFDEC visibility during national fishery exhibition in Thailand



Visitors to TD booth in “Pramong Nomklao” exhibition in Thailand

SEAFDEC Training Department co-organized with the Department of Fisheries of Thailand a fishery exhibition at the Future Park Department Store, Patumthani Province, Thailand.

From 1 to 10 July 2011, TD joined hands with the DOF Thailand in organizing “Pramong

Nomklao”, a National Fishery Exhibition, with the TD’s exhibition theme on “Fishing Technology and Safety at Sea for Fishing”. Displayed during the exhibition were deep-sea trap, model of gears such as trawl, gill net, push net, and safety at sea equipment such as life raft, radar, hydro-acoustic equipment, etc. As a highlight of this year, TD also put on display the octopus behavior, together with other TD publications, brochures, VCDs to promote the activities and visibility of SEAFDEC. ❖

SPECIAL REPORT

INLAND FISHERIES MANAGEMENT: Potentials and constraints for securing sustainable livelihood

By SEAFDEC Training Department

Inland fishery resources are the main sources of protein and employment for peoples in agricultural sectors surrounding the Mekong River Basin as well as around natural lakes, man-made reservoirs and irrigation systems. The Southeast Asian Fisheries Development Center (SEAFDEC) is taking major role to develop and promote sustainable fisheries management for securing food, livelihood, poverty alleviation and sustainability to both marine and inland fisheries sectors in Southeast Asia. Recognizing the importance of inland fisheries to food security in rural fishing communities, SEAFDEC formulated a three-year project (2008-2011) on “Promotion of Inland Small-scale Fisheries Management through Rights-based Fisheries and Co-management towards Institutional Building and Participatory Approaches”.

Implemented in Lao PDR and Myanmar, the project secured the cooperation of the Department of Livestock and Fisheries (DLF) of Lao PDR and the Department of Fisheries of Myanmar as counterparts of SEAFDEC. The concept of rights-based fisheries and co-management approaches were promoted through the project. These approaches, which was first introduced in the Regional Guidelines on Responsible Fisheries in Southeast Asia: Responsible Fisheries Management, are new but challenging means of promoting limited access regimes in the waters of the Southeast Asian region.

Project framework

The project activities aimed to encourage the local people to recognize the significance of participation in decision-making processes and define sharing functions and responsibilities between community-based organizations and government-based agencies. While promoting co-management and rights-based fisheries approaches for sustainable inland fisheries management, the project also advocates the practice of demarcation conservation areas which should be coupled with the establishment of relevant community rules and regulations. Activities to improve the capacity of local people in accessing alternative sources of income were also conducted through training on fish processing and fish culture. As planned, the project envisaged to enable the local communities to secure job opportunities, create alternative livelihoods, and utilize the resources in sustainable manner, and accordingly, alleviate poverty and acquire social safety net.

Technical assistance

Technical assistance provided by the project was mainly on institutional building, area selection and demarcation, fish processing, and fish culture techniques, and the knowledge acquired were transferred to the stakeholders in Lao PDR and Myanmar. Institutional building was conducted by organizing a workshop for local representatives to take part in discussing and defining the functions and responsibilities in controlling and managing the demarcated areas for conservation. This technique has been integrated with rights-based fisheries approach to limit fishing activities in the conservation areas. Additionally, institutional building was also introduced to fishers and women’s groups who were trained on fish culture and fish processing to enable them to take leading role in handling group activities.

Implication of technical assistance

Demarcated areas for conservation

In Lao PDR, SEAFDEC and DLF organized two national workshops attended by local representatives of twenty-three villages to discuss the functions, responsibilities and responsible persons/agencies in managing and controlling the demarcated conservation areas in Nam Ngum Reservoir, Vientiane Province.



*Conservation area
and fish releasing at
Nam Ngum Reservoir*



As a result, the draft functions, responsibilities and responsible persons/agencies were completed. In addition, water areas of four villages, namely: Ban Donxaiudom, Ban Sangsawang, Ban Huayprung and Ban Mai were identified as pilot sites for the project's conservation area management.

SEAFDEC and DLF installed twenty-eight buoys to mark and let the local fishers and residents know about the conservation areas. Moreover, the identified four villages had been declared no-fishing zone and that fishing is not allowed in the areas in order to enhance new recruitment of the fish stock. To further strengthen the enhancement of new recruitment of stock, SEAFDEC distributed brochures containing information on the importance and benefits of practicing conservation areas to the local residents.

In Myanmar, similar national workshop was organized to educate local residents and enhance their understanding of the concept of co-management and rights-based fisheries approaches taking into consideration the demarcation of areas for conservation purposes. After the workshop, SEAFDEC and DOF Myanmar installed sign boards to notify the public on the area demarcated for conservation in Duya Inn Lake. Furthermore, another two activities such as topographic survey and responsible fishing were also conducted to strengthen the rationale and importance of the conservation areas. The result of the topographic survey was used to select a proper demarcated area for conservation. Thus, an area in the Lake with 5-10 meter water depth had been appropriated as conservation area and designated by a floating raft to notify the fishers. This area is known to maintain its water level even during the dry season ensuring a well-circulation of water and water quality in the Lake. Responsible fishing was also promoted to be practiced beyond the conservation area to secure stock recruitment in the Lake.



The Conservation zone established in Myanmar



Alternative and additional source of employment

Fish culture was of interest to fishing communities in Lao PDR as it could provide the local people with alternative source of employment opportunities. In this regard, SEAFDEC organized a training on fish culture in Udonthani Province, Thailand with representatives from the four pilot villages of Lao PDR participating. The representatives were then able to gain knowledge and skills in tilapia and frog culture and management. After the training, the participants indicated that the knowledge they gained would be useful in their effort to enhance the promotion of fish culture as means of alleviating poverty, improving access to market channels, and conserving the environment through sustainable use of natural resources.



Training on fish cage culture in Udonthani Province, Thailand (above); and

Training on fish processing in Myanmar (right)



In Myanmar, fish processing was introduced to women's groups in Hinthada Township, Ayeyarwaddy Region. Training on fish processing was organized to enable the local women to utilize low economic value fishes for value-added products. The training, which strongly emphasized on making use of low economic value species and small-size fishes, aimed to come up with dried seasoned fish which is a traditional product and crispy fish that needed a new technique. During the training, the local women worked in groups of four to five members to continuously produce dried seasoned fish products that would match with local preference. One-day training on accounting management system was also conducted for the local women's groups. Consequently, such fish processing activity enabled the women's groups to acquire incentives and generate additional income for the groups.

Major constraints

- **Resources management:** In Lao PDR, the government was not yet ready to enact national fisheries laws. Thus, the draft functions, responsibilities and responsible persons/

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REGIONAL PROGRAMS

TD organizes special meeting on sharks

SEAFDEC Training Department organized a “Special Meeting on Sharks Information Collection in Southeast Asia” from 15 to 17 September 2011 in Bangkok, Thailand.



Representatives from SEAFDEC/MFRDMD during the Special Meeting on Sharks Information Collection in Southeast Asia

The Meeting was opened by Mr. Kenji Matsumoto, SEAFDEC Deputy Secretary-General. There were 35 representatives from SEAFDEC Member Countries, SEAFDEC Departments and other international organization who participated in this meeting, which was an activity under Environmental-related Tasks in the Southeast Asian Region Program, aiming to update

sharks’ information and discuss ways to improve data/information collection on sharks for national/regional usage.

SEAFDEC’s initiatives related to sharks, such as management of data/information of sharks for their sustainable utilization; shark production, utilization and its management (including NPOA-sharks); improvement/development of sharks data collection, were discussed. The recommendations from the meeting would be used for planning of future activities to support and improve information collection on sharks in the Southeast Asian region. ❖

TD enhances HRD on identification of deep-sea fishes for Member Countries

From 18 to 21 July 2011, SEAFDEC Training Department and MFRDMD jointly organized an “On-site Training on Identification of Deep-sea Fishes” in Kuala Terengganu, Malaysia. This training was undertaken under the program on “Deep-Sea Fisheries Resources Exploration in the Southeast Asian Waters” implemented by SEAFDEC since 2007. The training had the overall objective of enhancing the capacity of the participants to identify fish species those found at the continental shelf and slope (sea depth of 100-400 meter) using fish morphology and habitat preferences.

The Meeting was attended by sixteen Malaysian taxonomists and field biologists from the Department of Fisheries and MFRDMD. Comprehensive set of knowledge was provided on the identification of deep-sea demersal fish species with emphasis

on the species found in the waters of Sabah and Sarawak, Malaysia which was collected during 28 June -11 August 2010 onboard the M.V. SEAFDEC 2.

Within four days of in-class lectures, presentations and hands-on laboratory exercises, the participants were familiarized with the characteristics used in distinguishing fish families and/or genera to the lowest taxonomic level. Participants’ skills were also developed in counting, measuring, and examining the

pertinent external anatomical structures that are necessary for the identification of deep-sea fishes. ❖



Practical activity in identification of deep-sea fishes during the on-site training (above); and Laboratory practice in the taxonomic keys of benthic macro-invertebrates (below)



TD organizes regional workshop on management of inland fisheries

SEAFDEC Training Department organized the “Regional Workshop on the Promotion of Inland Small-scale Fisheries Management Through Rights-based Fisheries and Co-management Towards Institutional Building and Participatory Approaches Project: Transferring Lesson-Learned and Experience” on 14-15 September 2011 in Phetchaburi, Thailand.



Regional Workshop on the Promotion of Inland Small-scale Fisheries Management

The workshop started with presentations by project officers on the activities implemented under the project during 2008-2011. In Lao PDR, activities were undertaken in Nam Ngum Reservoir, in response to the requirements for conservation and enhancement of fishery resources as expressed by the local communities. Conservation zones were established at village level, with aquaculture activities in cages/pens promoted as alternative livelihood for people. For Myanmar, activities were undertaken in Duya Inn Reservoir, focusing on the introduction of fish processing activities, and enhancing local women’s roles in fish processing to maximize the use of low-value fish. In

addition, activities were also conducted to support the establishment of small conservation area in the reservoir

From the project implementation, it was found that the important causes/factors that threaten the sustainability of inland fisheries could be the deterioration of habitat caused by non-fisheries sectors, e.g. other agricultural activities, hydro-power generation. There is also insufficient information to value the importance of inland fisheries; thus establishment of appropriate methodologies for valuation of inland

fisheries (in terms of social and economic aspects) should be considered in order to enhance better understanding of the public, planners and policy makers.

The Workshop concluded with recommendations for improving the collection of data and information on inland fisheries; enhancing the understanding on the importance of inland fishery; and strengthening the capacity of local communities for conservation and management of inland fishery resources. ❖

TD organizes special meeting on improvement of tuna information

SEAFDEC Training Department in collaboration with the Department of Fisheries, Thailand organized a “Special Meeting on Improvement of Tuna Information and Data Collection in

Southeast Asia” from 7 to 9 September 2011 in Songkhla Province, Thailand. The Meeting was attended by the representatives from Indonesia, Japan, Malaysia, Myanmar, Philippines,

Thailand, Vietnam; officers from SEAFDEC Secretariat and TD; as well as the representative from Thai Food Processors’ Association.



The Special Meeting on Improvement of Tuna Information and Data Collection in Southeast Asia

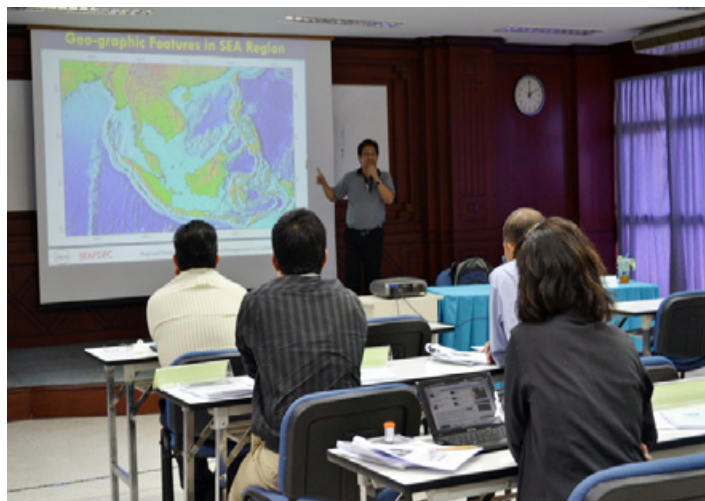
During the Meeting, up-to-date data and information on tuna fisheries from the Member Countries, relevant international and regional tuna information providers, as well as those gathered by SEAFDEC through various technical projects and the regional fishery statistical bulletin, were presented. Discussion was subsequently focused on identifying ways and means of improving tuna data and information collection in order to facilitate better understanding on tuna fisheries as well as to support effective conservation and management of tuna fisheries in the future. ❖

TD organizes training course on combating IUU fishing

SEAFDEC Training Department organized a “Regional Training Course on Fisheries Management to Combat Illegal, Unreported and Unregulated Fishing for Fishery Managers” in Samut Prakan, Thailand from 6 to 15 September 2011.

The course was opened on 6 September 2011 by the SEAFDEC Deputy Secretary-General, Mr. Kenji Matsumoto. Ten participants from SEAFDEC Member Countries who are generally responsible for providing information to decision makers as a basis for policy formulation and transforming policy into management planning attended in the training course.

This course aims to encourage fishery managers to cope with the situation of overcapacity and unsustainability of the fisheries resources in their respective countries through policy formulation and



Participants attending the lecture in combating IUU fishing training course

also design fishery management plans effective for combating IUU fishing that suit each country’s conditions.

This training course comprised i) Lectures/discussion on topics relevant to fisheries management concepts,

countermeasures and approaches to combat IUU fishing and case studies; ii) Field trip and visit to Samut Sakorn fishing port and other relevant places; and iii) Two-day workshop on “Way forwards to combat IUU fishing in each country”. ❖

TD holds regional workshop on HRD to combat IUU fishing

From 6 to 8 July 2011, SEAFDEC Training Department organized the “Regional Workshop on HRD Programs for Sustainable Fisheries and Related Countermeasures to Combat IUU Fishing in Southeast Asia” in Bangkok, Thailand.

The Workshop aims to provide a forum for information exchange on HRD programs for sustainable fisheries in the region; identify the needs and requirements on HRD programs in promoting sustainable fisheries and

related countermeasures to combat IUU fishing in the region; and establish regional network to mobilize and strengthen cooperation in terms of HRD programs among the SEAFDEC Member Countries.

Prior to the discussion, field visit was arranged to various places in Samut Sakorn, including one of the most important fishing ports of Thailand. During the trip, participants observed and obtained information on the initiatives and practices relevant to combating IUU fishing, e.g. boat licensing, the use of fishing logbook, procedures and practices related to port state measures. Participants



Representatives from some of the Member Countries during the Regional HRD Workshop

also visited facilities of the Union Food Products Company and Food Marketing Organization of Thailand, to gain understanding on deep-sea and offshore fisheries, particularly on the joint venture fisheries between Thailand and other countries. Capping the study trip was a visit of the training facilities at TD.

During the Workshop, presentations and discussions were made on HRD activities to be undertaken under the program on “Promotion of Sustainable Fisheries and IUU Fishing Related Countermeasures in Southeast Asia” to be supported by the Japanese Trust Fund from 2011 to 2015. Group discussion was also conducted to deliberate on the status and needs, as well as the challenges and opportunities for HRD to combat IUU fishing in the region. The Workshop also agreed on the establishment of the regional HRD network as a platform for launching of relevant efforts to combat IUU fishing in the future. ❖

Strengthening of the Gulf of Thailand sub-regional cooperation

SEAFDEC-Sida project organized the 3rd Sub-Regional Meeting on the Gulf of Thailand during 20-22 September 2011 in Siem Reap, Cambodia.

The Meeting aims to review the actions undertaken based on recommendations given during meetings previously organized under the project and provide platform of discussion among representatives from four countries bordering the Gulf of Thailand, namely Cambodia, Malaysia, Thailand and Vietnam, to address issues on IUU fishing, fisheries habitat management, fishing capacity, port monitoring, etc.

During the Meeting, Dr. Chumnarn Pongsri, SEAFDEC Secretary-General

reiterated the successful conduct of the ASEAN-SEAFDEC Conference in June 2011, particularly the adoption of the Resolution and Plan of Action to serve as basis of the region's sustainable fisheries development for food security towards the coming decade, which is in-line with the direction of the SEAFDEC-Sida project. He also expressed views that this Meeting would provide good opportunity for countries in exchanging views and strengthening close cooperation within the sub-region in various areas.

Discussion and recommendations were then made on possible issues/actions for sub-regional cooperation, such as those on conservation and management of fishery habitats/



resources particularly the critical habitats during the critical stages of life cycle; strengthening of cooperation in combating IUU fishing and management of fishing capacity including MCS network, community-based management and vessel registration/licensing; and improving collection/sharing of data and information towards better management of fisheries in the sub-region.



Special Report: Inland fisheries management: Potentials and constraints for securing sustainable livelihood

(Continued from Page 9)

agencies developed through the project could not be fully practiced. In Myanmar, fish leasable holders with concessions to utilize the inland fishery resources participated in decision-making process, but other users did not. Nevertheless, all users agreed to use responsible fishing gear and to fish beyond the areas demarcated for conservation.

- **Access to finance:** lack of financial access is a common issue in rural areas. Hence, the fish culture and fish processing activities in Lao PDR and Myanmar, respectively, are facing difficulties in the development and improvement of the capacity of rural people.

- **Uncontrolled and natural condition:** In Lao PDR, local residents could face a problem of the uncontrolled conditions of Nam Ngum Reservoir II when the plan set for managing water level to produce electricity would be implemented. This plan had not considered the inland fisheries in Nam Ngum Reservoir I which is lower than Reservoir II. As a consequence, local residents could


encounter hardships to manage the conservation area and promote fish culture activity. In Myanmar, severe dry season could affect the areas demarcated as conservation zones, which could probably result in smaller conservation area.

- **Preference attitude and processing technique:** The people of Myanmar prefer to consume oily fish products. Hence, the dried seasoned products of the local women in Hinthada Township should be oily. Furthermore, inadequate knowledge and materials for good packaging could turn the oil of the fish products smelly which could also result in short shelf-life.

Conclusion

The project framework implemented in each country varies due to differences in problems, needs, culture, and government regulations. Nevertheless, the implication of the project activities towards poverty alleviation was certainly similar. From the project implementation, it could be observed that inland fishery resources have

high potentials to create job opportunities for local residents especially those living along man-made reservoirs and natural lakes. Fish processing and fish culture are credible activities that could provide alternative and additional sources of incomes to local residents. However, such activities could encounter problems related to limited access to finances/capital for investment and market for products distribution.

In fish processing, culture and consumers' preference, as well as healthy nutrition and hygiene should be the highest priorities to be taken into consideration. Meanwhile, local users' participation in decision-making and resource management should be made continuing practice until the local people are able to establish management bodies that would lead the communities and local residents in the management of the inland fishery resources. In addition, governments should support and provide technical assistance to the said management bodies to enable them to properly handle local resource-based management for sustainability and food security. 

FUTURE ACTIVITIES

Date	Venue	Title	Organizer
2011			
3 October 2011 - 24 February 2012	Samut Prakan, Thailand	Training Course on Fishing Vessels Operation for Tinsulanonda Fisheries College	TD
4-6 October	Yangon, Myanmar	Regional Workshop on Strengthening Assessment of Fisheries and Aquaculture in the Asia-Pacific Region for Policy Development and Management	APFIC
4-7 October	Bangkok, Thailand	Regional Core Experts Meeting on Fishing License, Boats Registration and Information on Export of Fisheries Productions in Southeast Asia	TD and MFRDMD
11-13 October	Bangkok, Thailand	Workshop on Identification of Critical Fishing Grounds and on Regional Habitat Rehabilitation and Management Approach	TD
11-13 October	Phuket, Thailand	Sub-regional Consultative Meeting of the Southern Andaman Sea	SEAFDEC-SIDA
17 - 21 October	Rizal, Philippines	Training Course on Catfish Hatchery & Grow-out	AQD
18-20 October	Bangkok, Thailand	The Regional Technical Consultation on Addressing Technical Issues Related to Selected Commercially-exploited Aquatic Species	TD
18-21 October	Singapore	Regional Training Course on Utilization of Freshwater Fish for Value Added Products	MFRD
19-29 October	Samut Prakan, Thailand	University Students Training Course	TD
1-3 November	Kuching Sarawak, Malaysia	Regional Workshop on Management of Sea Turtle Foraging Habitats in Southeast Asian Waters	MFRDMD
3-4 November	Kuala Lumpur, Malaysia	12 th Meeting of SEAFDEC Information Staff Exchange Program (ISEP)	Secretariat
14-16 November	Manila, Philippines	34 th SEAFDEC Program Committee Meeting	Secretariat
14 November - 2 December	Rizal, Philippines	Training Course on Freshwater Aquaculture	AQD
17-18 November	Manila, Philippines	14 th Meeting of the Fishery Consultative Group of the ASEAN-SEAFDEC Strategic Partnership (FCG/ASSP)	Secretariat
22 November - 16 December	Samut Prakan, Thailand	Training Course on Ecosystem Approach to Fisheries and Extension Methodology	TD
22 November - 1 December	Iloilo, Philippines	International Training on Community-based Freshwater Aquaculture for Remote Rural Area of Southeast Asia	AQD
28-30 November	Vietnam	On-site Training Workshop on Traceability Systems for Aquaculture Fish	MFRD
19-22 December	Samut Prakan, Thailand	3 rd Regional Technical Workshop on Safety at Sea and Optimizing Energy Use for Small Fishing Boats	TD
2012			
24 Jan - 2 Feb (Tentative)	Samut Prakan, Thailand	Training Course on Monitoring Control and Surveillance (MCS) in Combating IUU fishing in Southeast Asia Region	TD
30 January - 1 February	Bangkok, Thailand	FAO, BOBLME and SEAFDEC workshop on Putting into Practice the FAO Technical Guideline on Marine Protected Areas (MPAs)	FAO, BOBLME and TD
2-3 February	Bangkok, Thailand	Regional Workshop on Promotion of Strategic Implementation of Fisheries Co-management and Right-based Fisheries for Enhancing Good Governance in Coastal and Inland Fisheries Management	TD
1-2 March	Iloilo, Philippines	International Workshop on Fish Health Management with the theme "Accelerating Awareness and Capacity Building"	AQD

AQD: call for papers on fish health

AQD is calling for papers to be presented at the "International Workshop on Fish Health Management" that will be held 1-2 March 2012 in Iloilo City, Philippines. The papers must be on: i) Accelerating awareness in fish health management through capacity building; or ii) Innovative research and novel diagnostic techniques for fish pathogens. Deadline for submission of abstracts for oral or poster presentation is 1 December 2011; please see AQD website www.seafdec.org.ph for more details. The workshop is supported by the Japanese Trust Fund. ☒

Effects of tropical climate variations explained

(Continued from Page 16)

solar radiation (as input) with earth radiation (as output). The tropics has become a heat engine because it drives global climate change from the varying levels of heat emanating from sea surface temperature (SST) which is transported by the oceans to the atmosphere. In the Indo-Pacific region, the main players in tropical climate system are: i) ENSO (El Niño Southern Oscillation - El Niño/La Niña); ii) IOD (Indian Ocean Dipole Phenomenon); iii) MJO (Madden-Julian Oscillation), and ISV (Inter-seasonal Variations).

Dr. Mizuno emphasized that the tropics drives global climate change because of surplus energy making it a dynamically and thermodynamically special area, and where the interaction between the ocean SST and the atmosphere generates varying tropical climate. Therefore, long-term buoy observation is essential to predict the ENSO and IOD phenomena, while intensive observation of MJO could lead to better understanding of the tropical climate. Moreover, rainfall observations could reveal a clear diurnal cycle in marine continents (MCs). The results of the analysis also indicated that ENSO, monsoon and IOD control the variation of rainfall in the MCs. Specifically, the ENSO shifts could warm the waters in Western Pacific which affects the economically important skipjack resources, and in general, global warming affects the life cycle of fishes including their growth.

JAMSTEC conducts Tropical Moored Buoy Observations in collaboration with relevant agencies mainly the NOAA of the U.S.A. among others. The main focus of the global tropical moored array is for the enhancement of monsoon research and forecasting of historically data-sparse Indian Ocean. In this connection, the main activity of JAMSTEC involves the deployment of m-TRITON mooring buoy systems in the Pacific and Indian Oceans. During the visit of Dr. Mizuno to SEAFDEC Secretariat and Training Department from 15 to 17 September 2011, he indicated the intention of JAMSTEC to possibly collaborate with SEAFDEC in the analysis of tropical climate changes in the Pacific and Indian Oceans through the use of the M.V. SEAFDEC for the moored buoy observations. ☒

Note for contributors

The SEAFDEC Newsletter publishes quarterly news on all aspects of fisheries in Southeast Asia. The Editors reserve the right to accept and/or abridge articles based on available space. Anyone wishing to submit an article to the SEAFDEC Newsletter is requested to send it to the Editor in Chief or Editors at the given addresses.

Information in this Newsletter may be quoted only if reference is made to SEAFDEC.

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Effects of tropical climate variations explained

The Tropical Climate Variability Research Program studies the unique atmosphere-ocean phenomena occurring in the tropical Pacific and Indian Oceans. These include the El Niño-Southern Oscillation (ENSO), the Indian Ocean Dipole Mode (IOD), monsoon, and the Madden-Julian Oscillation (MJO), which are the major interrelated tropical oceans/atmospheric variations that affect human lives and economic activities in the Indo-Pacific region.

Specifically, the Program aims to reveal the mechanisms of fluctuation of ENSO in the Pacific Ocean and IOD mode phenomena based on an observation network of moored buoys. For the Western Pacific and Indian Oceans, the Program endeavors to construct high precision observation networks of the ocean, atmosphere and land, and unmasks the water cycling mechanism related to monsoons from diurnal to annual variability as well as



Participants listening to the lecture at the SEAFDEC-NACA Meeting Room (left); and Dr. Keisuke Mizuno with the SEAFDEC Secretary-General (below)

the mechanism of the Madden-Julian Oscillation and its effects.

The paper presented by Dr. Keisuke Mizuno conveys the results of the analysis of tropical climate variability, the role of ocean observing systems, and the effects of tropical climate variations. In presenting the characteristics of tropical climate, he stressed that the earth energy budget should aim to balance



(To be continued on Page 15)

SEAFDEC- Sida project organizes the On-site Workshop on the Integration of Fisheries and Habitat Management and the Management of Fishing Capacity

In order to strengthen the capacity of fishing communities and relevant agencies in improving the integration of fisheries and habitat management and the management of fishing capacity, SEAFDEC with funding support by the Swedish International Development Cooperation Agency (Sida) organized

the a 2-day “On-site Workshop on the Integration of Fisheries and Habitat Management and the Management of Fishing Capacity” from 26 to 27 July 2011 in Ranong Province, Thailand. The Workshop was attended by eighty participants from central and local government/institutions, local fishers,

relevant stakeholders related to fisheries activities in Thailand, as well as those from Myanmar to facilitate sharing of views and experiences.

During the Workshop, resource persons delivered and shared their knowledge on the status of fisheries resources around the Andaman Sea and Mergui Archipelago, the importance of coastal habitats, and relevant Fisheries Act and Regulation. Information on ecosystem approach management, trans-boundary and (highly) migratory species (*Rastrelliger* spp. and related species), large management area (*refugia*), MPAs, Ramsar sites, heritage sites, institutional matrix on MCS network, vessel record and inventory, port monitoring, capacity building, climate change, and local knowledge development were also addressed and highlighted.



Participants attending the On-site Workshop on the Integration of Fisheries and Habitat Management and the Management of Fishing Capacity

(To be continued on Page 5)