



Bi-annual Project Progress Report  
of  
Integrated Coastal Resources Management in Pulau Langkawi  
(ICRM-PL)  
July - December 2006

Compiled by

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Training Department  
Southeast Asian Fisheries Development Center

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## Biannual Project Progress Report

- Project title** : **Integrated Coastal Resources Management in Pulau Langkawi (ICRM – PL)**
- Program Categories** : Programs under the ASEAN-SEAFDEC FCG Mechanism
- Program Title** : Capacity Building of Human Resources and Participation in Integrated Coastal Resources Management
- Duration of Project** : 1<sup>st</sup> Phase: 17 months (August 2003 – December 2004 under TF-1)  
2<sup>nd</sup> Phase: 24 months (January 2005 – December 2007 under TF-4)
- Executing Agency** : The Department of Fisheries, Ministry of Agriculture, Malaysia
- Collaborating Agency** : SEAFDEC/TD
- Funding Agency** : The Japanese Trust Fund (FCG Scheme and Special 5-year Program)  
DOF Malaysia (Co-financing)
- Proposed Budget (2006 only)** : USD 25,005 (Under the Japanese Trust Fund 4)  
USD ? (DOF Malaysia Input)
- Reporting period** : **July to December 2006**

Prepared by : Sei Etoh, Project Leader  
10<sup>th</sup> February 2007

## TABLE OF CONTENTS

	<u>Page</u>
1. GENERAL ACCOUNT .....	3
2. ACTIVITIES .....	3
3. OUTCOMES .....	9
4. MAJOR CONSTRAINTS .....	10
5. WORKPLAN FOR THE NEXT REPORTING PERIOD .....	10
6. REPORTS PREPARED .....	11

### ANNEX

Annex 1 : Annual Activity Monitoring Sheet .....	12
Annex 2 : Report on Fishery Resources Monitoring Survey in Langkawi .....	14
Annex 3 : Prospectus of Monitoring Socio-economic Survey .....	17
Annex 4 : Fisheries Resources Management Plan for Kuala Teriang .....	22
Annex 5 : Minutes of 8 <sup>th</sup> ICC Meeting .....	30

## **1. GENERAL ACCOUNT**

The main progress achieved during this reporting period features that the consensus on the proposed Fisheries Resources Management Plan was reached at the Stakeholders Consultation.

The mid-term socio-economic survey was conducted.

More positive participation to the marine biological survey by FRI, Penang, was raised and it was committed.

100,500 mangrove saplings were planted in Kuala Teriang by KEN.

The function of Local Enforcement Unit commenced with the limited scale.

The responsibility of fishery MCS services has been transferred from DOF to newly established Malaysian Maritime Agency.

Two members of KEN Kuala Teriang participated in the Annual Meeting of KEN Federation held in Negeri Sembitan, in where the activity of the Women's Group (KEW) was highlighted.

The business transaction by the Women's Group fell off compared with the one in 2005.

Installation of FEDs by SEAFDEC was postponed to 2007.

The 8<sup>th</sup> project Implementation Coordinating Committee (ICC) meeting was summoned.

The planned mid-term project evaluation was not conducted.

## **2. ACTIVITIES**

The activity of the project has been more or less normalized in the wake of rehabilitation from the tsunami assault as described in the following. The progress of project activity can be monitored in line with the planned work schedule as shown in the annual activity monitoring sheet of **Annex 1**.

### **2.1. Monitoring survey**

#### Fish landing survey

The daily exercise of collecting fish landing data has been continued by the designated enumerators. The completed data sheets were monthly sent to SEAFDEC/TD for analysis. This exercise will be taken over by FRI, Penang, from 2007. The data from August 2005 to July 2006 is under analysis by SEAFDEC/TD.

#### Marine resources survey

The periodical survey with 3 to 4 months interval has been jointly continued with SEAFDEC/TD and FRI, Penang. The obtained data from August 2005 to July 2006 was analyzed and compiled by SEAFDEC/TD.

In fact, the contribution from FRI to this activity has been noticed as being very limited

although it was agreed from the outset that the marine biological survey should be jointly conducted between SEAFDEC/TD and FRI under the collaborative project frame work. At the 8<sup>th</sup> ICC meeting held on 15 November 2006, this point was raised and discussed. As the result, it was agreed by the DOF Malaysia side to pay more attention to this activity by sending regularly the researchers of FRI when the SEAFDEC/TD carries out the research work. This consolidated collaboration work is very vital and opportune at this time when the regime of community-based fishery resources management is just about to begin.

In the wake of the above understanding, the technical consultation between SEAFDEC/TD and FRI was made on 23 December 2006 in Langkawi. It was decided in this meeting that;

- SEAFDEC/TD and FRI, Malaysia, would continue the marine resources survey and daily fish landing data collection jointly,
- to do that, the FRI dispatches two researchers regularly every month to the project site while the SEAFDEC/TD sends a researcher once every four months,
- the survey methodology should be an identical one with the one employed in the past,
- analysis and compilation of data are conducted jointly with both the parties,
- the impact survey of FEDs should be conducted jointly with both the parties in line with the schedule of FEDs' installation.

The detailed description on this meeting is seen in **Annex 2** "Report on fishery resources monitoring survey in Langkawi".

#### Monitoring socio-economic survey

The mid-term socio-economic survey was jointly taken place with DOF Malaysia and SEAFDEC/TD from 18 to 20 July 2006. This is not only for monitoring the socio-economic movement having been occurred in the project area since inception of the project operation, but also conducive to be the road map for the attempt to establish a zoning arrangement which is about to draw near finalization. It is anticipated that this new approach in community-based coastal resources management may give positive impacts to the community life after being introduced. Therefore, the survey covered the neighbouring villages as well to see over-spilling effects. During conducting this survey, it was disclosed there was some unreliable figure released by KEN on the number of fisheries households and an additional door-to-door survey was entrusted to a local agent in August / September to verify the actual figure in the project operational area. The detailed description for this survey is seen in **Annex 3: Prospectus on monitoring socio- economic survey in Langkawi**. The raw data is being analyzed and it will be compiled in early 2007.

## **2.2. Encourage and extend the CBRM concept**

#### CBRM approach

After discussion of the 2<sup>nd</sup> draft of the Fishery Resources Management Plan (FRMP) at the 7<sup>th</sup> ICC Meeting in April 2006, it was further circulated among the concerning parties for comments particularly from the legal office. The 3<sup>rd</sup> draft incorporating their views was submitted to the Stakeholders Consultation held on 13-14 November 2006 in Alor Setar, Kedah State for finalizing the context of FRMP with stakeholders participated. To this consultation, 75 stakeholders were participated. Each provision of the proposed FRMP was scrutinized by participants and lively discussions were made all through the consultation. Even the representatives from the industrial fisheries consented to the principle of FRMP and expressed their willingness to be a member of the Coordination and Monitoring Committee. As the result,

the consensus was unanimously reached on the proposed FRMP and the 4<sup>th</sup> draft was prepared. During this meeting, it was agreed that the neighbouring village, Kuala Chenang, would be included in the fisheries resources management area of those three villages, Kuala Teriang, Kuala Meraka and Batu Ara, since they were traditionally fishing in the same area. The draft was seen in **Annex 4**. It is expected that this draft is further refined by the legal expert and submitted to the Minister of Agriculture for approval and subsequent promulgation of the ordinance.

#### Local Enforcement Unit (LEU)

An effort to establish the LEU was continued in 2005 after visiting the enforcement center of Penang, but it hanged for a while due to the fact that the responsibility of fishery MCS function was transferred from DOF to the newly organized institution called "Malaysian Maritime Agency" under the Prime Minister Office from 2006. However, the LEU office was set up in September 2006 with assignment of two enforcement officers who could assume round-clock duties. Basically necessary equipment like a BHF radio communication set and a patrolling boat were still not provided yet but the enforcement function has begun in a way that fishermen would report the precise positions of illegal fishers when they detect at sea and responding to these information a sailing order to a patrol boat of the Central Enforcement Unit of Langkawi is issued. They claimed that the time to arrive to the position by the patrol boat would be no more than 20 minutes. The fishermen are in opinion that since such information has been spread among potential illegal fishermen cases of encroachment have been evidently reduced. As a next step, discussion is under way to formulate the Standard Operating Practices (SOP) among responsible authorities like Marine Police under Ministry of Transport, Malaysian Maritime Agency and DOF Enforcement Unit. This would be a guideline of coordination and arrangement to be pursued among these agencies.

### **2.3. Encourage local businesses**

#### Women's group activity

The construction of the second cottage scale fish processing yard under the auspices of Japanese Grass-routes Assistance for Tsunami Disaster (JGATD) had been delayed for slow process of designing and approval within the Malaysian authorities and it was eventually started in October 2006. The cost allocated for this construction is as follows.

(a). Building cost	: RM 100,000 (JGATD)
	RM 60,000 (DOF)
(b). <u>Machinery and equipment</u>	: <u>RM 26,000 (JGATD)</u>
Total cost	: RM 186,000

Three snack types of product called *Maruku* (dry noodle type and biscuit type) and *Rempeyde* (fried cracker type) was developed by the own study of women's group and the trial production was taken place in September. It seems to be quite acceptable.

As seen in the **table 1** below, the total gross income in 2006 turned out to be deficit. This is a very disappointing outcome. The gross income in 2005 was RM2,724.40 after deduction of RM3,590.00 distributed to the members as shares compared with the one at RM1,272.00 in 2006. Considering the fact that the production in 2005 just resumed in March with rehabilitation of the tsunami disaster, this degradation in the transaction is inexplicable. The causes should be investigated and the remedial measures should be taken.

Table1: Monthly transaction by Women's Group in 2006

Month	B/F	Sale	Material	Share for attendance	Gross income	Balance
January	3,178.50	611.50	533.30	0.00	78.20	3,256.70
February	3,256.70	2,248.00	711.45	0.00	1,537.05	4,793.75
March	4,793.75	795.00	103.20	0.00	691.80	5,485.55
April	5,485.55	102.00	3,004.35	0.00	-2,902.35	2,583.20
May	2,583.20	651.00	285.90	0.00	365.10	2,948.30
June	2,948.30	1,226.00	755.00	0.00	471.00	3,419.30
July	3,419.30	882.00	1,352.00	0.00	-470.00	2,949.30
August	2,949.30	882.00	611.00	0.00	271.00	3,220.30
September	3,220.30	495.00	440.00	0.00	55.00	3,275.30
October	3,275.30	291.00	144.70	1,272.00	-1,125.70	2,149.60
November	2,149.60	1,167.00	1,310.00	0.00	-143.00	2,006.60
December	2,006.60	1,550.00	731.00	0.00	819.00	2,825.60
<b>Total</b>		<b>10,900.50</b>	<b>9,981.90</b>	<b>1,272.00</b>	<b>-352.90</b>	<b>2,825.60</b>

The marketing channels have been expanded through the private traders like Ismail Group. A sales outlet at the Handicraft Sales Center was provided by LADA but it did seem to be promising.

In a bid to diversify the product line, a workshop was organized in May 2006. Resulting from the workshop, a suggestion to produce mince meat products in the newly constructed processing yard was proposed, and a study to initiate this production was carried out by the women's group. As the result, however, they concluded that it would not be feasible as raw material for minced meat products would be hardly available at reasonable prices in the vicinity

At the National Contest on Women's Group Activity organized by the Ministry of Agriculture on 8<sup>th</sup> August 2006, the women's group (KEW) in Kuala Teriang was awarded the 5<sup>th</sup> prize for their various group activities. This is only the one group selected from the fisheries sector.

The 3-day training course in accounting was organized by the Kedah State on 13-15 September for KEN and KEW in the state, in which 3 members of KEW participated. The total trainees were 40.

The Annual Meeting of the KEN and KEW Federation was held in the state of Negeri Sembitan on 19-21 December 2006 with 128 representatives from all KENs / KEWs of the country, in which two members of Women's Group (KEW) Kuala Teriang participated and presented their activity. Their performance was extremely highlighted as the first success case in Malaysia and an effort to disseminate similar activities in other KEWs was proposed.

#### Cage culturing

From the outset of the project initiation, it was proposed to take off the scheme of cage culturing for grouper and an application to acquire necessary spaces was submitted to LADA who was the responsible agent for granting such a permission. The LADA eventually granted the permission to the KEN to use the space near Kuala Teriang in September 2006. The necessary fund was proposed to the Member of Parliament from Langkawi to be granted.

### Mechanical workshop

The delayed construction of a mechanical workshop cum office premises was started in October 2006. It will be completed in early 2007. The cost of construction is as follows.

(a). Building cost	: RM 50,000 (JGATD)
(b). Machinery and equipment	: RM 4,000 (JGATD)
(c). Ice making machine	: RM 9,000 (JGATD)
(d). <u>Office equipment (incl. PC)</u>	: <u>RM 11,903 (JGATD)</u>
Total cost	: RM 74,903

### **2.4. Enhance human resources capacity building and participation**

As aforementioned, the Stakeholders Consultation was held on 13-14 November 2006 in Alor Setar, Kedah State for finalizing the context of FRMP with stakeholders participated. In this meeting, it was observed that the representatives of fishermen expressed their views and assertions openly. Their positive participation in formulation of the fisheries management plan was impressed.

The 5<sup>th</sup> Annual General Assembly of KEN Kuala Teriang was held on 23 December 2006 in the project site. In this meeting with participants of around 35, the activity of KEN in 2006 was presented by the Chairman and the detailed transaction was explained by the Treasurer with the supporting document like a bank statement which was endorsed by the Internal Auditor. Also, an election to select new executive and committee members of the KEN was taken place and as the result the same members as before were reelected except one committee member.

In the above annual meeting, the lecturing on "Impact on fisheries habitat by mangrove" was given to the participants by the researcher of FRI. It was very opportune and conducive as the project was deploying the mangrove reforestation program in the project operational area in collaboration with Department of Irrigation and Drainage and Tourism Promotion Board.

The representative of KEN participated in the annual meeting of KEN Federation on 19 – 21 December in the state of Negri Sembilan. In this meeting, the women's group activity is rather highlighted.

The spirit of voluntary participation to the community development work has been stimulated in mangrove tree planting. This occasion will encourage KEN member and their families to participate in community development work more frequently.

### **2.5. Fishing gear technology improvement**

In the fishermen's workshop on monitoring the outcome of introduction of new or improved fishing method held in November 2005, it was found that the fishermen had not been adopting any introduced fishing method although they appreciated the effectiveness and simplicity of those methods. They also explained that one of the reasons lay in the tsunami assault that drove the fishermen paying all attention to urgent rehabilitation work but not to such development work. Because of such a movement and also dwindling financial inputs to the project, it was decided in the 4th SC meeting held in March 2006 that this activity line should be put in the lower priority. Following to this decision, this activity was placed in lower priority. Instead, however, the representatives of KEN expressed their keen interest in undergoing an advanced



training in repairing wooden boat with FRP material. Reflecting to their request, the boat repairing training is planned to take place after completion of the mechanical workshop which is under construction under the auspices of Japanese Grassroots Tsunami Fund.

The KEN expressed their keen interest to use Thai type crab traps which were introduced through the training course in 2004 by the project and requested the project to make an arrangement to procure 300 sets of crab traps from Thailand. The project will meet their request in early 2007.

## **2.6. Rehabilitate and enhance coastal resources**

Prior to deploying the mangrove reforestation activity, the test plantation of 60 seedlings was made with PVC pipes in April 2006 in the Kuala Terian Bay by the Drainage and Irrigation Department (JPS). But, all of them died down within 2 months. After experiencing this result, an improved method was tried out in September with planting seedlings which were germinated and grown in the nursery beds for two months. Meantime, the project was also seeking some solution on proper remedial methods to increase the survival rate of mangrove trees and the investigation was made with the mangrove specialist of FRI on 16 November 2006. The detailed discussion with the responsible office of JPS at the site was made and as the result it was agreed to try out planting grown seedlings in the coast line of Kuala Teriang.

After passing experiences as above, the planting of 1,500 mangrove saplings were taken place in front of the bay of Kuala Teriang toward the end of December 2006 by hands of volunteers from KEN.

## **2.7. Implementation Coordination Committee (ICC) meeting**

The 8<sup>th</sup> project ICC meeting was held on 15 November in Alor Setar. The main issues in the meeting were:

- progress in zoning arrangement and the future steps to be taken,
- slow progress on construction of the workshop and the fish processing yard under the auspices of JGATD,
- establishment of local enforcement unit,
- installation of ARs and FADs,
- follow-up the socio-economic survey,
- the project evaluation,
- the proposed tentative work plan in 2007,
- the proposed venue for the 5<sup>th</sup> SC meeting.

At this meeting, it was agreed among others that (1) the FRI, Penang, would participate more positively in the project operation especially in the field of marine fishery resources survey, (2) the planned installation of FADs in 2006 was postponed to early 2007 so as to ensure their durability awaiting the result of experiment in installation of the improved type of FED conducted in Chumphon in middle 2006, (3) expediting completion of a mechanical workshop and a fish processing yard which were under construction and (4) the project and KEN put more emphasis on environmental improvement work by voluntary participation. The detailed description is seen in the attached **Annex 5: Minutes of 8<sup>th</sup> ICC Meeting.**

## **2.8. Mid-term project evaluation**

The mid-term project evaluation was expected to be conducted in August and an effort was exerted to identify a suitable candidate for outsourced consultant by DOF and SEAFDEC/TD. In spite of such efforts, no proper candidate could be identified within limited budget. Given such a constraint, it was agreed at the 8<sup>th</sup> ICC meeting that the mid-term project evaluation would be conducted together with the final project evaluation in October 2007 subject to endorsement at the forthcoming 5<sup>th</sup> SC meeting.

## **3. OUTCOMES**

The major outcomes of the project activities during this reporting period are:

### Baseline surveys

- Regular fish landing data collection practice is continued.
- Regular marine biological survey is continued.
- FRI committed to participate in the project activity more positively.
- The mid-term socio-economic survey was conducted.

### Encourage and extend locally-based fishery resources management

- The draft of Fishery Resources Management Plan (FRMP) was refined by the legal advisor.
- The Stakeholder Consultation to discuss the context of proposed FRMP was organized with participation of all stakeholders concerning the coastal fishery resources management in Kuala Teriang.
- The function of Local Enforcement Unit commenced although it was within the limited scale.

### Promotion of fish based businesses

- Construction of the new premises for processing fish products has been progressed.
- The new snack types of product have been developed.
- The activity of Women's Group (KEW) was highlighted at the Annual Assembly of KEN.

### Enhance human resources capability

- The Stakeholder Consultation was held.
- The 5<sup>th</sup> Annual General Assembly for KEN Kuala Teriang was held.
- Lecturing on "Impact on Fisheries Habitat by Mangrove" was given to KEN members.
- The spirit of voluntary participation to community development work has been inspired.

### Fishing gear technology development

- Procurement of 300 Thai type crab traps is underway.

### Rehabilitation and enhancing coastal resources

- Experimental mangrove tree plantation was conducted.
- 1,500 mangrove saplings were planted.

### Committee meetings

- The 8<sup>th</sup> ICC meeting was summoned.

#### **4. MAJOR CONSTRAINTS**

It has been frequently reported that commercial vessels damage fishing gears within the proposed community fishing zone while they are navigating. There is no means to regulate such passages under the prevailing legal framework. It should be regulated within the newly formulated Fishery Resources Management Plan (FRMP) with the relevant authorities and to be monitored by the LEU to be newly established. In this sense, soonest promulgation of the FRMP should be realized.

As described in 2.3. Encouraging local business, it was obvious that the output in production of fish-based products in 2006 was deteriorated compared with the one in 2005; i.e. RM12,924 in 2005 against RM10,901 in 2006. Also, the gross income is similarly deteriorated from RM2724 to RM353(-). It is very discouraging, given the fact that the net production days are limited during 2005 because of suspension of work due to rehabilitation from the tsunami assault. It is ironical that the prominent various activities and voluntary contribution by the women's group of Kuala Teriang were widely appreciated and applauded. An investigation to identify the causes and take remedial measures in 2007 is necessary. Otherwise, it will be worsened with the larger scale fish processing operation in use of the newly built processing yard which entails more operational expenses.

#### **5. THE WORK PLAN FOR THE NEXT REPORTING PERIOD**

The work plan to be executed in the next reporting period from January to June 2007 is as follows.

##### Baseline / monitoring survey

- Continue fish landing data collection
- Analyze and compile the annual data for 2006
- Continue marine biological survey with more positive participation by FRI
- Analyze and compile the annual data for 2006
- Impact survey for installed FADs/ARs
- Compile and publish the mid-term socio-economic survey

##### Encourage and extend the CBRM concept

- Finalize the fishery resources management plan (FRMP)
- Submit the FRMP to Ministry for promulgation
- Workshop on implementation of the FRMP and zoning arrangement
- Prepare setting-up a crab bank scheme
- Strengthening the function of Local Enforcement Unit (LEU)

##### Promotion of fish-based businesses

- Diversification and standardization of the products produced by KEW in use of the newly constructed fish processing yard (IPM/DOF)
- Marketing promotion (IPM/LADA)
- Training in management of the processing yard
- Training in new processing technology (IPM/DOF)
- Preparation of the setting-up of women's group network in Langkawi
- Preparation of grouper cage culturing by KEN

#### Enhance human resources capability and participation

- Conduct a workshop on implementation of FRMP
- A local seminar to restore the result of mid-term socio-economic survey
- Establish the women's group network in Langkawi
- Identify the voluntary participation in community development work

#### Fishing gear technology improvement

- A follow-up training course in boat repairing with FRP material
- Distributing Thai type crab traps to KEN

#### Rehabilitate and enhance coastal resources

- Construction of 10 units of FADs by KEN
- Installation of FADs
- Pre-installation impact survey for FADs
- Formulate mangrove reforestation plan with DID and its implementation

#### Committee meeting

- 5<sup>th</sup> SC meeting
- 9<sup>th</sup> and 10<sup>th</sup> ICC meetings

## **6. REPORTS PREPARED**

Reports and documents prepared under the project during to this reporting period are listed below.

<u>No.</u>	<u>Title of the report</u>	<u>Name of author</u>	<u>Date of issue</u>
01.	Report on Fisheries Resources Monitoring Survey in Langkawi	Penchan L. & Weerasak Y	Dec. 2006
02.	Report on Monitoring Socio-economic survey	Sumitra R.	Jul. 2006
03.	Minutes of 8 <sup>th</sup> ICC meeting	Sumitra R.	Dec. 2006
04.	Report on Women's Group (KEW) activity in Kuala Teriang	Sumitra R.	Dec. 2006
05.	Travel Report to Langkawi on 22-24 December 2006	Sumitra R.	Dec. 2006
06.	Fisheries Resources Management Plan for Kuala Teriang (English version)	Wahab R.	Dec. 2006
07.	Report on Activity of Kuala Teriang Women's Group (KEW) in 2006	Sumitra R.	Dec. 2006
08.	Travel Report to Langkawi on 22 – 24 December 2006	Sumitra R.	Dec. 2006

Annex 1: Project Progress Monitoring Sheet for CRM-PL

←→ Activity planned  
 ↔ Activity Actual  
 As of 31 December 2006  
 Revision: 2

Activity	2006												Remarks	
	1	2	3	4	5	6	7	8	9	10	11	12		
1. Base line / Monitoring survey														
1.1. Fish landing survey at the project site														
1.1.1. Regular collection of data														Continued activity
1.1.2. Analyze and compile the annual data														Data from Aug. 2005
1.2. Marine resources survey														
1.2.1. Regular collection of data														Continued activity
1.2.2. Analyze and compile the annual data														Data from Aug. 2005
1.3. Specific topic survey														
1.3.1. Impact survey by introduction of new fishing methods														Cancelled
1.3.2. Analyze and compile the annual data														Cancelled
1.3.3. Impact survey by installation of FEDs/ARs														Installation of FADs was postponed to 2007
1.3.4. Analyze and compile the annual data														- do -
1.4. Socio-economic survey														
1.4.1. Prepare and conduct survey														
1.4.2. Analysis and compilation of data														Continued in 2007
2. Encourage and extend the CBRM concept														
2.1. Zoning arrangement														
2.1.1. Finalize the fishery management plan (FMP) in the demarcated zone														
2.1.2. Submission to DOF for endorsement														Delayed to 2007
2.1.3. Approval by the promulgation by Minister														
2.1.4. Embodiment of zoning arrangement														Continued activity
2.2. Local enforcement unit														
2.2.1. Identify an effective approach for local enforcement														
2.2.2. Take relevant steps for the realization (to be more specified once measures are determined)														
2.3. Crab bank scheme														
2.3.1. Preparation for establishment of Crab Bank														Under negotiation with LADA
2.3.2. Operation of the Crab Bank														Continued activity
3. Encourage local business														
3.1. Diversification / standardization of products produced by women's group														
3.1.1. Study on diversification of products														With PM
3.1.2. Training in new processing technologies														With PM
3.1.3. Construction of necessary facilities														Japanese Tsunami fund Continued in 2007
3.1.3. Marketing promotion														With PM/LADA
3.2. Improvement of group management skills														
3.2.1. Follow-up training course for book keeping/accounting in use of C/P														With LADA
3.2.2. Local seminar on women's participation in group activity														
3.3. Expansion of fisheries related business for the community (KEN)														
3.3.1. Study and identify alternative business opportunity														Continued activity
3.3.2. Take a relevant step for realization (to be more specified once measurements are determined)														

Activity	2006												Remarks	
	1	2	3	4	5	6	7	8	9	10	11	12		
4. Enhance human resources capacity building and participation														
4.1. Enhance capacity building for FRMC														
4.1.1. Stakeholders workshop					↔						↔			
4.1.2. Fishers workshop on management plan			↔					↔						
4.2. Restoration of data and information to the community														
4.2.1. Local seminar on research works done											↔			
4.2.2. Local seminar on impacts of project activities											↔			
4.3. Encourage participation to environmental development work														
4.3.1. Fishers' workshop on environmental development work											↔			
4.3.2. Organize and carry out various volunteer work (to be more specific after having a workshop)											←	↔	↔	Continued activity
5. Fishing gear technology improvement														
5.1. Training in improved fishing methods							↔							
5.1.1. Follow-up training course in boat repairing														Postponed to 2007
5.1.2. Follow-up training course in selected fishing gear as required														If and when required
6. Rehabilitate and enhance coastal resources														
6.1. Fish Enhancing Devices (FEDs)														
6.1.1. Installation of FEDs					←	-----	→							Postponed to 2007
6.1.2. Evaluation on effectiveness and function of FEDs	←	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Continued activity
6.2. Installation of ARs														
6.2.1. Installation of ARs	↔	↔												By LKM
6.2.2. Follow-up marine biological survey														Ref 1.3.3.
6.3. Mangrove reforestation														
6.3.1. Formulate reforestation plan with D D					←	-----	-----	-----	-----	-----	-----	-----	-----	Drainage & Irrigation Department
6.3.2. Implementation of reforestation plan				↔								↔		Continued activity
7. Project evaluation														
7.1. Mid-term project evaluation														
7.1.1. Conduct Mid-term project evaluation								↔						
7.1.2. Report publication										←	-----	-----	-----	Bound to be done together with the final project evaluation
8. Committee meeting														
8.1. Steering Committee (SC)		↔	↔											
8.2. Implementation Coordination Committee (CC)			↔	↔			↔				↔	↔		

## **Annex 2: Report on Fishery Resources Monitoring Survey in Langkawi** **22 – 24 Dec 06**

Penchan Laongmanee  
Weerasak Yingyuad  
30 December 2006

### **Travel itinerary**

#### **22 Dec 06**

Leave BKK for Langkawi

#### **23 Dec 06**

08:30 – 12:00 Participated in fisherman group meeting

13:00 – 15:00 Discussion with FRI staff for the draft schedule of fisheries resources monitoring activity in 2007

#### **24 Dec 06**

09:00 – 13:00 Interview fisherman and fish sampling

Leave Langkawi for BKK

### **Background**

The fisheries resource monitoring survey had conducted since April 2004. The activity first aimed to ensure the sustainability of available marine resources, especially around the ARs and FADs after introduction of improved fishing efforts in the project operational area. However, the improved fishing effort in not widely used in the community yet. Then the activity objective is transformed to be monitored on status and trend of fisheries resources utilized by the project community.

The activity was conducted by SEAFDEC/TD staff with cooperation of FRI (Fishery Research Institute) and DOF Malaysia in some survey period. FRI staff willing to conduct this activity, however they face to a budget problem.

In the year 2007, DOF Malaysia is going to launch fishery management project. The monitoring on fishery resources is a key activity to evaluate the project. Therefore FRI staff purpose to conduct this activity. The trip is aim to clarify the activity of fisheries resources survey for the year 2007

### **Minute of discussion on Fisheries resource monitoring in 2007**

#### **1. Participant**

##### **From Department of Fisheries, Malaysia**

1. Mr. Ahmad Husin Alias , research officer, Fisheries Research Institute (FRI) , Penang
2. Mr. A. Krishnasamy, Fisheries Extension Division
3. Ms. Sabina Binti Saleh, Extension Officer, District DOF, Langkawi

##### **From SEAFDEC/TD**

4. Mr. Seiichi Etoh, Expert of coastal fisheries management
5. Ms. Penchan Laongmanee, Fishery Oceanographer
6. Ms. Sumitra Ruangsvakul, Socio-Economist
7. Mr. Weerasak Yingyuad, Fisheries Resources Enhancement Scientist

## 2. Activity during 2004-2006

The discussion was started from presentation of Penchan on objective of the activity including methodology and brief result. Four sources of data: Fisherman logbook, Middle man logbook, Fish biology survey and Fishing gear experiment were analyzed for status and trend of fishery resource used by fisherman in the project site. Type of data from each source is as follow:

- Fisherman logbook (every fishing
  - CPUE (long term monitor, trend)
  - Main sp composition

This type of data source was planned to collect from fisherman. Data from selected fishermen who joined the experimental fishing in improved fishing methods and the subsequent training fishing (a logbook should be introduced during the experimental fishing). However, we found that record in the logbook is too different from their normal behavior then we could not get any data back in the beginning. Finally, we ask middle man (Mr. Azman) in the village to record catch information of fisherman that sell fish to him.

- Middle man logbook (every fishing day)

We received total landing and value in the project site from this source of data. At the beginning of project, there are four middlemen who collect main catch of fisherman in the village volunteer to record logbook. However, after Tsunami on 26 December 2004. Two of them changed their job. Currently, we get data from only two middlemen in the village.

- Fishery biology survey (every 4 month)
  - CPUE
  - Sp. Composition
  - Size distribution

In every four month, fishery biology survey team (SEAFDEC staff, FRI staff and DOF staff) will spend about three day for sampling catch from fisherman to measure length and weight, check species composition of catch from each type of fishing gear and interview fisherman for some necessary information for calculating CPUE

- Sea trial and training of selected fishing gear
  - CPUE
  - Sp. Composition
  - Size distribution

The sea trial and training of selected fishing gear (Collapsible crab trap, Bottom long line and Babylonia trap) was conducted by fishing gear team of SEAFDEC. Catch of all fishing gear were identify for species composition, measured for size distribution and calculated for CPUE.

The fisheries resource survey activity was started since April 2004. But after Tsunami in 26 December 2004, almost of fishing boat and gear were damage, data collection was not possible. The activity was restarted on August 2005.

Mr. Etoh point out that the activity is important for monitor and evaluated the result of project implementation. However SEAFDEC staff is not able to come to the project site in every month. The involving of FRI could fulfill all necessary information for monitoring status and trend of fisheries resources of the project site.



### **3. Plan for 2007**

Mr. Ahmad Husin Alias, the representative of FRI understand the important of the activity and explained that FRI interest to do this activity but during the two year past of this activity FRI could not be fully involved in the activity , because of budgetary problem. He said that for the year 2007 he and some other FRI staff will prepare proposal and request budget to DOF Malaysia.

The newly prepared proposal will included all activity that SEAFDEC had carried out and will add the frequency of data collection for fishery biology survey from every four month to be every month. The draft of proposal will sent to Mr. Etoh by first week of Jan 2007 and send to Mr. Mohamad Shaupi for budgetary requested during the steering committee in February 2007. FRI will lead the activity with the cooperation of SEAFDEC team. At least one SEAFDEC staff (Mr. Weerasak Yingyuad) will join the fishery biology survey in every four month. This is for follow up the activity.

### **4. How to evaluate the FAD**

The meeting also discuss on how to evaluate FAD (Fish Aggregating Device). Next year, SEAFDEC will set 10 FAD to the management zone of project site. The general fishery resource monitoring survey result cannot be use for FAD evaluation because fishing ground of fisherman in the village in not only at the FAD. Therefore, the meeting agreed to conduct a special survey to collect necessary data and information before and after installation of FADs to do simple evaluation. Tentative schedule of FAD activity is as follow:

March → Pre survey

April → Set FAD

August → Post survey

Monitoring activity can be done by asking volunteer hand line fisherman to record information of their catch such as species composition, total weight, etc. FRI will also develop proposal for FAD evaluation. The proposal is also going to submit for budgetary approval during the steering committee in February 2007.

## Annex 3

### Prospectus

#### Monitoring Socio-economic Survey in Langkawi, Malaysia

##### Integrated Coastal Resources Management in Pulau Langkawi (ICRM-PL)

### 1. Background

The project “Locally-based Coastal Resources Management in Pulau Langkawi” was initiated in Malaysia in August 2003 as a collaborative project under the operational framework between the Department of Fisheries in Malaysia and SEAFDEC/TD. This project had been progressing on the right track until December 2004 when the devastating tsunami assaulted the project area. Most fishing boats and gear were either destroyed or lost, and fish landing facilities were ruined. Many fishermen’s houses collapsed. Together with NGOs and foreign aid organizations the Malaysian authorities exerted their efforts to rehabilitate the tsunami stricken area. Thanks partly to their dedication and partly to the self-helped motivation among fishermen, the fishing activity has been more or less resumed to the extent at the level prior to tsunami in 2004.

Furthermore, the main emphasis underlining the project was shifted to human resources development and institutional capacity building; meanwhile, the funding source for the SEAFDEC was shifted from the Japanese Trust Fund 1 to Trust Fund 4 in January 2005. Although such conceptual approach to the project was shifted, the basic project efforts made in 2005 were centered on rehabilitation of the tsunami stricken damages. At the mean time, given the fact that the planned project activity had been unexpectedly suspended or delayed due to the tsunami assault, it was agreed at the 28<sup>th</sup> Program Committee Meeting of SEAFDEC in December 2005 that the project tenure would be extended for one more year until the end of 2007.

Also, an attempt was made to establish community fishing zone compatible with the plan for community-based fishery resources management, which has been the mainstay of the project activity and is close to being finalized. The movement that devolves a fishery resources management to community level is entirely a new approach in the country; and the impact of this new management framework on fishing community and industry need to be monitored.

Hence, this is high time to conduct the socio-economic survey as part of the project to monitor socio-economic changes resulted from the project operation. The monitoring is also relevant to the tsunami damage and rehabilitation efforts as the obtained data set can be used as a major reference for future achievement toward realization of CBFRM and the integrated community development. The baseline survey on socio-economics was conducted upon initiation of the project in October 2003, and the present survey is actually a follow-up to the initial survey.

### 2. Objectives of the survey

The objectives of the survey are as follow:

- a. To monitor changes in socio-economic conditions in the project area started in August 2003,

- b. To monitor changes caused by the tsunami assault and to identify its lasting impacts,
- c. To monitor the concernment on the project operation and the new approach of community- based fishery resources management (CBFRM) among stakeholders,
- d. To identify the present socio-economic conditions as a baseline reference for future development with the on-going application of CBFRM
- e. To clarify the extent of awareness toward the CBFRM concept and the positive cooperation with fishermen in neighboring villages under the newly developed framework of fishery resources management regime

### **3. Expected outputs of the survey**

The expected outputs of the survey are to achieve the follow purposes:

- a. Document the socio-economic status of the fishing community. The results will give a general picture of local people's employment, categorize and prioritize sources of income of local people. This information is also useful to re-arrange and re-design activities for community development.
- b. Document the current status of coastal resources management. It will give an assessment on the degree of participation in CBFRM and the awareness of local fishers, and serve as a baseline indicator for project achievement.
- c. Assess the extent of gender roles involved in community economic development and resources management.
- d. Assess the role of KEN members and their functions. This will provide further and up-to-date information on project activities to encourage the KEN and its members to strengthen their capacity and function in the future. It also serves to measure their involvement in the newly formed Kuala Teriang Fishery Resources Management Committee (FRMC).
- e. Identify correctly the priorities of basic needs and interests of local people in the community, and to measure the attainments on those issues in comparison with the results obtained from the baseline survey.
- f. Assess the contribution on fishing and fish handling methods
- g. Clarify the extent of awareness and positive involvement of neighboring fishing communities in the CBFRM concept through the new zoning approach

All survey data and information will be analyzed and presented in tabulated forms as listed in Annex 3.

### **4. Survey design and methodology**

The survey will be conducted using the rapid rural appraisal (RRA) method, a common approach to collect information and identify problems in local communities. The main activity of the survey consists of interviewing fishers using a set of designed questionnaires prepared in English. The target interviewees will be selected at random among fishers and the interview be conducted at the household level. The fishers will be interviewed in Bahasa Malay by Malaysian interviewers and responses be translated into English and recorded on questionnaire sheets by the interviewers.

## **5. Topics to be studied in fishing communities**

The topics to be studied in fishing communities are listed as follow:

- Demography
- Livelihood activities
- Fishing practices
- Fisheries resources and landings
- Marketing and processing
- Conflicts
- Credit
- Gross income and expenditure)
- Asset ownership (boats, houses, land etc.)
- Labour (time required, different activities, etc.)
- Organizations / affiliations
- Living condition
- Outside linkages
- Women's roles in the community
- Future prospect and expectation
- Reactions and views on the on-going project activities

## **6. Questionnaire design**

The framework of the questionnaire design is shown in Annex 1 and the questionnaire sheet is attached in Annex 2.

## **7. Scale of the survey and targeted sampling groups**

The targeted sampling groups are the fishers residing in the villages upholding the KEN Kuala Teriang; i.e. Kuala Teriang, Kuala Melaka and Batu Ara. Based on the number of households in this community, 150 interviewees are required to attain 15 % representation at minimum, a statistical minimum figure to truly represent the community. In addition, a survey will also be conducted in the neighboring village, Kuala Chenang, with a specific purpose relative to their involvement in zoning of the community based fishery resources management under the management framework of Kuala Teriang Fishery Resources Management Committee (FRMC).

Table 1: Interviews conducted in 4 villages

<u>Village</u>	<u>Total Population</u>	<u>Household</u>	<u>Fisher's Household</u>	<u>Number of Fishermen</u>	<u>Representation interviewees</u>	<u>(%)</u>	
Kuala Teriang	1,460	225	119	24	16	13.4	
Kuala Melaka	870	120	268	55	36	13.4	
Batu Ara	644	161	366	73	48	13.1	
Sub-total:	2,974	506	753	152	100	13.3	
Kuala Chenang	2,953	520	220	44	30	13.6	
Total:	5,927	1,026	973	196	130	-	

## **8. Required manpower and time duration for interviews**

The manpower required for the survey is calculated as follow:

<u>Particulars</u>	<u>K. Teriang</u>	<u>K. Chenang</u>
- Time duration per interview (including travel time)	30 mins.	15 mins.
- Number of interviewees	100 HH	30 HH
- Total no. of hours required	50 hrs.	7.5 hrs.
- No. of hours available per day for surveying		5 hrs.
- No. of days available for survey		3 days
- Number of interviewers required		3.8 ps.

## **9. Qualification of interviewers**

As described above, 4 interviewers are required to attain the expected representation. The desired qualification of the interviewers is as follow:

1. adequate command in English language, especially the writing skill,
2. a good listener,
3. preferably, residents of Langkawi Island,
4. preferably, with working experience in the fields of socio-economics, fisheries biology, fisheries extension or officers of local fisheries stations .

## **10. Schedule of the survey**

The survey will be conducted according to the following schedules.

<u>Date</u>	<u>Activity</u>
17 July 2006 (Mon)	SEAFDEC/TD team arrives in Langkawi and coordinates with the Malaysian survey team on how to communicate with interviewees and how to fill up the questionnaire sheets
18 July 2006 (Tue)	Proceed to interviewing villages in Kuala Teriang and Batu Ara
19 July 2006 (Wed)	Continue the interview in Batu Ara and Kuala Melaka
20 July 2006 (Thu)	Continue the interview in Kuala Chenang, and a wrap-up meeting
21 July 2006 (Fri)	SEAFDEC/TD team leaves for BKK

## **11. Funding**

The funding for conducting the study will be drawn from the collaborative project arranged between SEAFDEC/TD and DOF of Malaysia, wherein SEAFDEC/TD will bear the traveling and transportation costs for the staff and miscellaneous costs incurred during the survey.

## Questionnaire Design Format for Kuala Teriang

Components of questionnaire	Parameters	Rationale	Output of the Component
Part I: General information	<ol style="list-style-type: none"> <li>1. Age</li> <li>2. Religion</li> <li>3. Marital status</li> <li>4. Composition of a family</li> <li>5. Educational level</li> <li>6. Occupation</li> <li>7. Source of daily income</li> <li>8. Monthly expenditures</li> <li>9. Asset ownership</li> </ol>	Correspondent to Objective (a) & (b)	Generally views information of fishers in the project area to arrange activities appropriately based on occupation and educational level
Part II: Engagement in fisheries Sector	<ol style="list-style-type: none"> <li>1. Type of engagement</li> <li>2. Fishing boat: length and license</li> <li>3. Type of fishing gear, seasons, fishing days and ground</li> <li>4. Catch distribution: by source, species and purpose of distribution and marketing channels</li> <li>5. Economics in fishing operation including expenditures</li> <li>6. Aquaculture operation including scale and species of fish culturing and economics of operation</li> </ol>	Correspondent to Objective (a)	Views capacity of fishers in capture fisheries, characteristics in fishing operation by different types of fishing gear and any measures taken for coastal resources management, a special insight is also made on after-
Part III: Gender role through time-consuming in employment	<ol style="list-style-type: none"> <li>1. In fishing operation, harvesting and house-keeping</li> <li>2. Duty in household</li> <li>3. Participation in social and religious ceremonies</li> </ol>	Correspondent to Objective (a) & (d)	Views role of fisher, fishers' wives and women in community economic development and resource management, including strengthening of family relationship. This is useful to provide extension program or training courses for the specific target groups and appropriate time-consuming arrangement
Part IV: Role of Community Fisheries' members and its functions in community development and resource management	<ol style="list-style-type: none"> <li>1. Members status: member of committee, regular member</li> <li>2. Members participating in KEN's activities and other group activities</li> <li>3. Categories of CF's activities and status</li> </ol>	Correspondent to Objective (a) & (d)	Views functional performance of KEN and its activities, how active and effective it is to contribute community economic development and resource management. Fishers' participation and level are informative to arrange activities with their contribution.
Part V: Any problems encountered, any interests envisaged, any needs desired and any expectation in the future dream, reactions against tsunami and appreciation against the project operation	<ol style="list-style-type: none"> <li>1. Clarification of problems, needs, interests and expectation in the near future</li> <li>2. Reaction against the tsunami disaster</li> <li>3. Appreciation against the project operation</li> </ol>	Correspondent to Objective (a) & (d)	Views fishers' perspectives, problems currently facing, future plans and dreams, that can measure the degree of negative or positive life styles. Also views fishers' reaction against the tsunami disaster and counter measures in future and fishers' evaluation against the project operation.

## Annex 4

### Draft **FISHERIES RESOURCE MANAGEMENT PLAN FOR KUALA TERIANG LANGKAWI, KEDAH**

#### 1.0 PURPOSE

To formulate Community-Based Fisheries Resource Management Plan for Kuala Teriang dan Kuala Chenang, Langkawi, Kedah in view to establish a smart partnership between government and local community. The partnership includes conservation, protection and management of fisheries resource that will lead to mutual benefit.

#### 2.0 BACKGROUND

##### 2.0.1 Project History

- Brief history of the project that was initiated in 2003
- Activities under the project are also underlined among others, FED and ARs installation, fish landing data collection, business activities, training and most importantly demarcation of management zone.

##### 2.0.2 Demography and Socio-economic

Information on population, occupation, sex ratio and profile of fishermen are underlaid.

Information	*Kuala Teriang	Kuala Melaka	Kuala Chenang	Pantai Kok
Population	2104	870	2953	342
Sex proportion M:F	1007:1097	416:454	1530:1423	163:179
No of household	386	120	520	60
No of fishermen	485	268	220	13
No of KEN's member	47	13	105	-
No of women's group	17	-	-	-
No of licensed fishing boat	73	39	40	13

*Nota : \* bilangan termasuk Batu Ara*

##### 2.0.3 Status of Fisheries Industry in the area

A total of 35 inboard engine and 38 outboard engine fishing boats registered in Kuala Teriang while in Kuala Melaka the record shows that there are 30 inboard engine and 9 outboard engine

fishing boats registered. Kuala Chenang registered 37 inboard engine and 3 outboard fishing boats. Kuala Teriang waters is also a common fishing ground for fishermen from Sungai Kok of which it has 3 inboard engine and 10 outboard engine fishing boats based there. The complete profile appears as Annex 1.

Four major type of fishing gears practiced in the vicinity are fish gill net, shrimp gill net, mackerel gill net and hook and lines while the major species landed are kembong, pomfret, Spanish mackerel, gerut-gerut, blue swimming crab, shrimp and squid. Collectively, Kuala Teriang, Kuala Melaka, Kuala Chenang and Pantai Kok recorded landing of 3000 metric tones. The detail information of fishing profile appears as Annex 2.

### **3.0 OBJECTIVE**

The objectives of community-based resource management are to promote active involvement of community to manage, protect, enrich and conserve fisheries resource sustainably in view to raise their socio-economic level and livelihood.

### **4.0 GOAL**

- a. direct involvement of the community.
- b. to ensure resource in the demarcated area be managed sustainably
- c. to implement CBFMR in accordance with CCRF
- d. to ensure an equitable distribution of resources among stakeholders
- e. equal share of responsibility between local community and government in managing the resource.
- f. to conserve the marine ecosystem in light to minimize further destruction
- g. to increase monthly community income level to at least RM1000

### **5.0 FISHERIES RESOURCE MANAGEMENT ZONE OF KUALA TERIANG**

#### **5.0.1 Zoning**

The demarcated zone is to be gazetted under section 61, Fisheries Act 1985 as "Fisheries Protected Area"

#### **5.0.2 Location**

Area covered approximately 30 nautical mile and has been traditional fishing ground for fishermen from Kuala Teriang, Kuala Chenang, Pantai Kok, Kuala Melaka and its vicinity and represented by these coordinates;

- a. position A (099°33'58.49"E, 06°20'47.14"N) to position B (099°37'52.00"E, 06°23'28.00"N)
- b. Position B to position C (099°38'49.00"E, 06°21'38.50"N) and connected to D (099°42'30.00"E, 06°19'21.00"N)
- c. From position D to position E (099°36'05.65"E, 06°17'47.12"N)
- d. From position E to position A and 5 nautical miles from the shore



### 5.0.3 Location of ARs and FADs

At present, the demarcated zone is a house of FADs and ARs erected by either Fisheries Development Authority ( LKIM ), Department of Fisheries, individual of SEAFDEC/TD. The following FADs and ARs listed below.

<u>FED<sup>1</sup></u>	<u>Longitude</u>	<u>Latitude</u>	<u>owner</u>	<u>year installed</u>
1.	099°37.655 E	06°20.450 N	Rozi bin Ismail	2005
2.	099°37.574 E	06°20.320 N	Rozi bin Ismail	1999
3.	099°36.164 E	06°20.134 N	Che Isa bin Hassan	1999
4.	099°36.247 E	06°20.276 N	Che Pa bin Bakar	1966
5.	099°36.019 E	06°20.276 N	Mahadzir bin Ibrahim	1966
6.	099°36.148 E	06°19.762 N	Hashim b Awang	1970
7.	099°36.342 E	06°19.830 N	Morat bin Osman	1966
8.	099°36.136 E	06°19.009 N	KEN Kuala Teriang (4 units)	2004
9.	099°36.400 E	06°20.266 N	KEN Kuala Teriang	2001

<u>AR<sup>2</sup></u>	<u>Longitude</u>	<u>Latitude</u>	<u>owner</u>	<u>year installed</u>
1.	099°36.006 E	06°20.327 N	LKIM	2001 /2004
2.	099°37.658 E	06°20.501 N	LKIM	2006
3.	099°36.106 E	06°19.652 N	LKIM	1997

## 6.0 THE ROLE OF INSTITUTIONS AND THEIR RESPONSIBILITY

### 6.0.1 Fisheries Resource Management Committee of Kuala Teriang

#### 6.0.1.1 Membership

The committee comprises of 17 members lead by a chairman and assisted by vice chairman, secretary, treasurer and 14 committee members. The DOF and LKIM to supervise the committee.

Advisor	: Dir of Kedah State fisheries /rep Dir of Kedah State LKIM/rep
Chairman	: Chairman of KEN Kuala Teriang
Vice chairman	: Chairman of KEN Kuala Chenang
Secretary	: Sec of KEN Kuala Teriang
Treasurer	: to be appointed
Member	: 1 rep JKKK Chenang 1 rep JKKK Kubang Badak 1 rep JKKK Kuala Teriang 1 rep JKKK Kuala Melaka 1 rep JKKK Batu Ara 4 rep KEN Kuala Teriang 2 rep KEN Kuala Chenang 1 rep of fishermen community Kubang Badak 1 rep Area Fishermen Association Langkawi

The committee reserve the rights to appoint additional member as where and when necessary including managerial staff.

### **6.0.1.2 Committee's Responsibility**

- a. To plan the resource management of the area
- b. to manage and protect FAD dan AR including access to the use, installation, maintenance and security.
- c. to ascertain the method and resource exploitation system in the area so as to ensure in conformity with the existing procedure and licensing policy of the department.
- d. to assist the government in managing, conserving, protecting the resource as well as to formulate the resource management relevant policy
- e. to resolve problem and conflict among the community
- f. to collect , safe keep and disseminate information on members, gears, boats etc.
- g. to conduct consultation with the concerned fishermen community
- h. to convene meeting at least once a month

### **6.0.2 Coordination and Monitoring Committee (JKPP)**

The application of a structured community-based resource management is unprecedented in Malaysia. Hence, there is need for a close monitoring and coordination by high level body of its implementation to ensure the goals are met. A Coordination and Monitoring Committee is formed to coordinate and monitor the implementation of the management plan.

Chairman	: Dir Gen DOF/ rep
Member	: Fishermen Industrial Devt, LKIM HQ Kedah Fisheries State Dir/rep Kedah LKIM state Dir/rep Langkawi District office Langkawi Devt Authority(LADA) Kedah Marine Dept Fisheries Research Institute of Malaysia Legal Advisor, DOF Kedah Department of Drainage & Irrigation Kedah Fshermen Association (NEKAD) Rep from JPSPKT (2) Rep from SEAFDEC/TD Rep from University Rep from NGO Member of Parliament ( to be decided )
Secretariat	: DOF Malaysia

### **6.0.2.1 Committee's Responsibility**

- a. to act as advisory body to JPSPKT mainly in the area of resource management and policy
- b. to monitor implementation of the plan
- c. to decide on unresolved matters that raised by JPSPKT

- d. to plan and formulate policy and concept implementation of CBFMR
- e. to review and decide on type of assistance and support services to be provided towards to successful implementation of the management plan including, R&D, training, information collection etc.
- f. to convene meeting at least once in 3 months

### **6.0.3 The Role of Community**

#### **6.0.3.1 Membership**

All member of KEN Kuala Teriang , Kuala Chenang and Kubang Badak will automatically be the member of the management system and deserve the equal rights to voice their opinion and be benefited form the resource exploitation of the area.

#### **6.0.3.2 The Rights of non-member**

Fishermen domicile in the vicinity and yet non-member to the system are allowed to exploit the resource on conditional basis. They also will not enjoy the privilege to utilize the facility provided such as FADs and ARs owned by KEN.

#### **6.0.3.3 The Role of Area Fishermen Association (PNK)**

Area Fishermen Association forms part of the system by being the member of JPSPKT. Fishermen are required to be first a member of PNK before being allowed to join KEN.

## **7.0 IMPLEMENTATION METHODOLOGY**

### **7.0.1 Consultation**

- a. The existing consultation mechanism such as KEN<sup>1</sup>, PNK<sup>2</sup> dan JKKK<sup>3</sup> will be continued.
- b. All proposals will be tabled to JPSPKT to be scrutinized and decided on for implementation
- c. Unresolved matters will be raised to Coordination and Monitoring Committee for decision by government.

### **7.0.2 Conflict Settlement**

Any conflict will first be handled by JKPSKT. Any deadlock will be further referred to the Coordination and Monitoring Committee or other relevant authority for decision.

Any violation or non-compliance to the norms and understanding reached, are to be resolved in accordance to existing or improved punishment system.

### **7.0.3 Government's Responsibility**

- a. to provide technical advice in the area of resource management, legal, organization management, entrepreneurship etc.
- b. to provide support in the area of research, training, extension etc.
- c. duty bound to continuously provide enforcement and effective prosecution
- d. secretariat for JPSPKT
- e. to ensure plan is implemented and expanded elsewhere.
- f. to register and provide detail info on FADs and ARs to the stakeholders
- g. to seek for development fund
- h. to conduct 'base-line survey' to gather basic info on resource status and socio-economic background.
- i. to conduct impact evaluation program in a stipulated period.
- j. to meticulously back the plan with regulation and practical legal instrument

### **7.0.4 The Role of the Community**

- a. to form and activate Implementation Committee (J/K pelaksanaan)
- b. to formulate and design implementation system for management plan, such as punitive measures, conflict settlement etc.
- c. to ensure that implementation procedures run in parallel with existing government policy in view to achieve its goal.
- d. to assist govt in enforcement
- e. to provide and channel info to govt
- f. to ensure that the rights of the community is equally safe-guarded
- g. care taker of the safety of FADs and ARs as well as other facilities provided
- h. to search for fund for day to day management operation, FEDs maintenance etc.
- i. to conduct environmentally related activities

## **8.0 SOURCE OF FUND**

### **8.0.1 Operational**

JKPSKT to secure and generate income /fund through *inter alia*

- membership fee
- revenue from fine
- FEDs and ARs utilization charge
- business activities e.g. recreational fisheries, boat rental etc.
- contribution from KEN, Area Fishermen's Association etc.

### **8.0.2 Government's contribution**

Possible government department and agency's contribution through normal development fund to enable the conduct of various activities *inter alia* research, training, provision of facilities etc. in accordance with the requirement and existing policy of the government.

## **9.0 MANAGEMENT OF FISHERIES RESOURCES**

### **9.0.1 Management of FADs and ARs**

- a. All FADs and ARs will be registered by the Department of Fisheries and will include various particulars among others locations, type, owner, size, date of deployment and registration number.
- b. All FADs and ARs constructed and installed by DOF/other agencies will automatically be transferred to KEN while those constructed and installed by individual will retain their ownership .
- c. All new installations will undergo stringent scrutinization by the JPSPKT. DOF/LKIM will provide technical advice in term of suitable location etc.
- d. KEN will be responsible in full to regularly maintain those FADs and ARs.
- e. JPSPKT will have to device operational procedure in consultation with members, non-members and sports fishermen in the use of ARs and FADs . This also to include procedures for mooring and anchoring.
- f. JPSPKT to resolve issue pertaining to encroachment and destruction of FEDs and ARs.

### **9.0.2 Management of Fishing Gear**

#### **9.0.2.1 Fishing Vessel**

To adopt conditions, policy and licensing procedures being implemented by DOF. List of registered vessels are appear as annex 3.

#### **9.0.2.2 Allowed Fishing Gear**

- a. hook and line
- b. trolling
- c. drift net except those stated in para 9.0.2.3
- d. fish trap with size less than 3 x 8 feet

#### **9.0.2.3 Not Allowed fishing Gear**

- a. squid net with lights
- b. squid trap
- c. anchovy purse net
- d. fish trap more than 3x8'
- e. long line
- g. gill net with mesh size > 4 inch

### **9.0.3. Environmental Conservation**

JPSPKT is to engage itself in conserving and protecting the environment by adopting responsible fisheries related activities. Envisaged to involve in the environmental related activities;

- a. mangrove reforestation

- b. waste effluent to the sea
- c. environmental awareness campaign
- d. beach and fish landing jetty cleaning,

#### **9.0.4 Legal Support and Licensing Procedures**

- a. The demarcated zone is gazetted under Section 61 Fisheries Act 1985 as Fisheries Protected Area.
- b. To make necessary amendment to licensing procedural so as to ensure its consistency and relevancy to the management plan.
- c. Through the Director-General's Directives as stipulated in section 10, Fisheries Act 1985.

### **10.0 MONITORING & EVALUATION**

To ensure the management plan is effectively implemented in light to achieve its objectives, a practical evaluation and monitoring system will be put in place. These include the following:

- a. Base line survey' to establish a reliable preliminary information prior to implementation.
- b. As a matter of sustainability, resource survey in the area will be conducted at regular intervals.
- c. Regular monitoring is possible through convening the JPSPKT and JPT meeting and a monthly report is expected to be produced.
- c. Internal impact assessment of the will be carried out by the DOF
- d. A third party impact assessment will subsequently be conducted once in three year.

(Translated by Mr. Abd. Rahman Abd. Wahab on 14 November 2006)

## Annex 5

### **Minutes of the 8th Project Implementation and Coordination Committee (ICC) Meeting**

Integrated Coastal Resource Management - Pulau Langkawi (ICRM-PL)

1. **Date:** 15 November 2006
2. **Venue:** Meeting room, Sentosa Agency Hotel, Kedah state, Malaysia
3. **Participants:**

#### DOF Malaysia

- |                                    |   |
|------------------------------------|---|
| 1) Mr. Mohd Shaupi Derahman        | Director, Planning, Development and International Division & NC, DOF, KL<br><u>Chairman</u> |
| 2) Mr. Abdul Hamid Yasin           | Operation Section Head, DOF, KL   |
| 3) Mr. Abd. Rahman Abd. Wahab      | Fisheries Officer, Planning Development and International Division, DOF, KL                 |
| 4) Mr. Razali bin Lajiz            | Fisheries Officer, Extension Division, DOF, KL  |
| 5) Mr. A. Krishnashmy              | Extension Division, DOF, KL   |
| 6) Ms. Noorliza Ramli              | Licensing Section, DOF, KL  |
| 7) Ms. Haryati Abd. Wahab          | Marine Resource Management Section, DOF, KL   |
| 8) Mr. Wan Muhammad Aznan Abdullah | Fisheries Officer, State of Kedah   |
| 9) Mr. Anuar bin Omar              | Fisheries Officer, State of Kedah   |
| 10) Mr. Badeli Hassan              | District Fisheries Officer, Langkawi  |
| 11) Mr. Anuar Salam Sulaiman       | IPM, Terengganu   |
| 12) Ms. Sabidah Salleh             | Fisheries Officer, Langkawi   |
| 13) Mr. Abdul Razak bin Latun      | FRI, Penang   |
| 14) Mr. Ahmad Husin Alias          | FRI, Penang   |

#### LADA

- 15) Mr. Ismail bin Abd. Manaf

#### LKIM

- |                                |                       |
|--------------------------------|-----------------------|
| 16) Mr. Sawahid Shamsuddin     | LKIM Office, KL       |
| 17) Mr. Mukhtar Affandi B AUSA | LKIM Office, Langkawi |

#### KEN, Kuala Teriang

- |                                |                            |
|--------------------------------|----------------------------|
| 18) Mr. Hj Pazil B Hj Din      | Secretary                  |
| 19) Mr. Murat Osman            | Member                     |
| 20) Ms. Mahani BT Masor        | Secretary of women's group |
| 21) Ms. Ku Mustura Ku Abd Aziz | Member of women's group    |

#### WWF-Malaysia, Langkawi (NGO)

- 22) Ms. Chitra Sevi

#### SEAFDEC/TD

- |                              |  |
|------------------------------|--|
| 23) Mr. Seiichi Etoh         | Project Leader                         |
| 24) Ms. Sumitra Ruangsivakul | Socio-economic Sec.Head, Research Sec. |

#### 4. Welcome address

The chairperson opened the meeting by welcoming the members of the 8<sup>th</sup> ICC meeting, explained the agenda and objectives of this meeting.

#### 5. Adoption of agenda

The proposed agenda in the Prospectus of the 8<sup>th</sup> ICC meeting was adopted without amendment as follows.

08.30-08.40	Opening of the meeting Adoption of the Agenda
08.40-09.00	Endorsement of the minutes of the 7 <sup>th</sup> ICC meeting
09.00-09.30	Description of the project activities since April 2006 (DOF/KEN/SEAFDEC)
09.30-09.50	Reporting the current status of disbursement and implementation of tsunami disaster rehabilitation work under the Japanese fund (Head of District Fisheries Office)
09.50-10.10	Coffee break
10.10-11.00	Discussion on immediate work plan until the end of December 2006 (Mr. Etoh) - Zoning arrangement - Crab bank - Women's group activity - Local business development for KEN - Local enforcement activity - ARs and FEDs (FADs) - Mangrove reforestation - Other volunteer work
11.00-11.50	Discussion on the proposed tentative work-plan in 2007 (Mr. Etoh)
11.50-12.00	Closing the meeting

#### 6. Contents of discussion

##### 6.1. Endorsement of the Minutes of the 7<sup>th</sup> ICC meeting

###### ARs and FEDs

- Mr. Etoh explained that the result of the test installation of FEDs in Chumphon that was carried out in August 2006 as 5 units had been lost by trawlers encroachment after passing 2 months but it was proved that the structure itself was robust and no problem for its durability in long usage. In case of Langkawi, positions of FEDs don't have any problems, because DOF are maneuvering effective local enforcement operation and thereby FEDs and FADs are prevented from losing by trawlers' encroachment.

###### Data collection

- Mr. Rahman informed that FRI was going to collaborate more intensively with ICRM-PL project especially on data collection from now on.
- Mr. Abd Razak informed that the FRI planned the schedule of data collection in 2007 already, but he would like to discuss the detailed plan and the format of data collection with SEAFDEC/TD and LKIM before the joint activity be commenced in 2007.



- Mr. Etoh informed that SEAFDEC will bring Ms. Penchan, Technical Officer, to discuss the detail and methodology in December.
- Mr. Etoh informed the meeting that SEAFDEC would like to get data of 2004 -2006 for fish landing survey in Langkawi having been carried out by DOF/Kedah that but no action had been taken by the DOF Malaysia side to data.
- Ms. Sabidah explained that data for 2005 is ready to be submitted to SEAFDEC as it had been sought from Kedah State while raw data of Kuala Teriang for 2004 had been sent to FRI/Penang for analysis. Data will be sent to SEAFDEC as soon as analysis completed.

#### Encourage Local Business

- Ms. Sabidah informed the new products of women's group that 3 kinds of new products had been developed; each product was composed of dried anchovy. The reason of developing addition products lay in that dried anchovy was very expensive in Langkawi and the production cost of old product became high especially in the low seasons of anchovy fishing.
- Mr. Etoh mentioned on KEN's business that in the first year of the project operation KEN Kuala Teriang proposed to initiate the fish cage culture, but it could not be materialized awaiting a permission from LADA. Mr. Pazil, Secretary of KEN, Kuala Teriang replied that LADA had approved the area to KEN for cage culturing, and KEN requested the subsidy for construction of cages to DOF.
- The meeting advised that KEN should try to seek possible fund from the Member of Parliament

#### FEDs (FADs)

- Mr. Etoh explained that in the wake of the result of the test installation in Chumphon, Thailand 10 units of FEDs would be installed early in 2007 in relation to the fisheries resources management.

#### Established and function of local enforcement unit

- DOF explained that new approach of enforcement had started in September 2006 and it had assigned 2 staffs to man the monitoring center for Kuala Teriang round the clock.
- Chairman reminded the importance of communication device to be provided to them, therefore instructed the enforcement unit to observe the followings;
  - listing down all the active staff's hand-phone numbers and have them posted on the notice board in the monitoring center,
  - making sure that Langkawi enforcement unit is on stand by mode at all time to be able to respond to complaints,
  - to ensure communication with other maritime agencies is functioning.

#### Socio-economic survey

- Mr. Etoh informed the meeting that the socio-economic survey was conducted in July 2007 with DOF and SEAFDEC/TD but the data of fishermen's interview was not completed yet although the matter was entrusted to the extension office of District DOF office.
- Ms. Sabidah mentioned that the data had finished by the new research contractor, because the old one could not perform the interviewing efficiently. Nevertheless, the District DOF office will take appropriate action to hand it to SEAFDEC soon.

#### Discussion on TOR for the mid-term project evaluation

- Mr. Etoh reported the meeting that the proposed mid-term evaluation might be canceled because of difficulty in identifying a qualified consultant at the price earmarked. Further he stated that it would be too late to conduct the mid-term project evaluation with the project which was to be terminated in December 2007. The evaluation should be conducted as the final project evaluation in 2007.
- The WWF local representative mentioned that they might consider the consultancy in conducting the mid-term project evaluation positively in consultation with their HQ and in doing so the TOR of mid-term project evaluation should be forwarded to them. Ms. Chitra agreed to look into the possibility and the result would be informed to SEAFDEC/TD.

#### Crab Bank

- Mr. Etoh explained the Japanese system of crab bank which had been already introduced in the project of Chumphon, Thailand, as this system did not need the space for a cage and might be more appropriately applicable in Langkawi. In this method, gravid crabs are released into sea after marking in carapaces with water proof markers.
- Mr. Pazil, secretary of Kuala Teriang KEN mentioned that he would bring back this information to the KEN for internal discussion.

#### 6.2. Current Status of Japanese Grass Root

- Mr. Badali explained the progress work under Japanese Tsunami fund that;
  - Mechanical workshop (RM 50,000) : 50% completed
  - Fish processing yard (RM 100,000) : 20% completed, additional input of RM 60,000 by DOF
  - Equipment for engine workshop (RM 4,000) : To be readily procured
  - Equipment for processing yard (RM 26,000) : To be readily procured
  - Ice making machine (RM 9,000) : Procured pending installation
  - Office equipment inc. a PC (RM 11,903) : Procured
- Mr. Badali mentioned that after the engine workshop be completed, the office of KEN Kuala Teriang would move to the new office and the old office would be leased out for a food shop for a member of KEN.

#### 6.3 Immediate Work Plan until the end of December 2006

- Mr. Etoh informed the meeting that the project planned to organize a fishers' workshop to which other KEN members in Langkawi should be invited to disseminate the project activity and exchange views freely from them.
- Mr. Pazil explained that as all four KENs in Langkawi would hold the annual assemblies to discuss the problem and work plan of 2007 toward the end December. The date of assembly will be informed to SEAFDEC later.
- Mr. Etoh informed that the project would participate in this assembly.
- Mr. Etoh informed the meeting that SEAFDEC/TD would be ready to procure necessary materials for construction of 10 sets of FED but the practical construction should be carried out by KEN's voluntary contribution. The KEN Kuala Teriang agreed to this program.
- Mr. Wan Muhammad Aznan of DOF/Kedah, informed the meeting that DOF had approved the budget on 10 units of ARs to be installed in the demarcated are of KEN Kuala Teriang in 2007. The DOF have surveyed the sea bottom for installation on

September 2007.

- Mr. Etoh informed the meeting that in the wake of failure in experimental planting of mangrove at Kuala Teriang Bay in April 2006 the project planned to try to plant mangrove again with consultation by a specialist from FRI and after convincing the successful result the mangrove reforestation program would be deployed in a full scale in 2007.
- Mr. Shaupi stated that efforts in this activity were duplicated with those by the Forestry Department difficult and it would need a discreet approach. Nevertheless, the project should discuss with the mangrove specialist of FRI tomorrow at the site in Langkawi and identify any practical solution, he added.

#### 6.4. Work plan 2007

##### Enforcement activity

- For establishment and embodiment of Local Enforcement Unit, the project should take the fact into account that many agents like Malaysia Maritime Agency (MMA), Marine Police and DOF and therefore close collaboration and coordination among these related agencies were vital, Mr. Shaupi stated.

##### Crab bank activity

- KEN Kuala Teriang will discuss on this program among members and thereafter they will decide on how to implement. Mr. Badeli commented that there may be a difficulty in application of crab bank system in Kuala Teriang as the crab gillnet fishing was predominant in Kuala Teriang to catch swimming crab.
- Pertinent to the above comment, Mr. Etoh gave more information that the project tried out the new type of crab trap successfully and planned to provide KEN with 150 unites of this trap in 2007 so that the crab bank would initiate with crab caught by this fishing method and live crab caught by gill nets should be followed.
- The representative of KEN commented that it might cause some conflict if both fishing methods would operate in the same fishing ground. Mr. Etoh stated that there should be a need for coordination between two groups and that is exactly why we need a community-based resources management tactic.

##### Encourage local business

- Mr. Etoh informed the meeting that more collaboration and contribution should be encouraged in 2007 by responsible agencies and divisions like IPM and DOF for product development and standardization of quality of products, LADA for marketing promotion will be promoted on marketing promotion and DOF for financial supports and the project for overall arrangement and financial management.
- Mr. Shaupi informed more on women's group activity that the monthly report of women's group activity should be reported to DOF and SEAFDEC by Ms. Sabidah.
- KEN mentioned alternative business opportunities as a fish cage culture would be started in the next year and necessary equipment would be provided by LADA and fingerlings and feed would be provided by DOF will be supported by DOF together with technical supervision. They envisaged to begin culturing with grouper in 10 cages cages with dimensions of 10 x 10 ft.

##### Enhance human resources capacity building and participation

- A local seminar on women's group will be held in Langkawi in a bid to establish a net work of women's group in Langkawi.

- For environmental development work, the project plans to promote mangrove reforestation and beach cleaning by KEN.
- Mr. Rahman requested SEAFDEC to assist preparing PR materials in view to educate public as well as to raise awareness of the on-going ICRM project. In addition, the material will also outline progress achieved since the taking-off. Budget may probably be secured by DOF.

#### Fishing gear technology improvement

- KEN requested Fiber Grass (FRP) training course to SEAFDEC/TD, but Mr. Shaupi was in view that DOF could assume this training by themselves.

#### Committee meeting

- SC meeting will be held on March 2007 in Thailand.

### **7. Other matter**

Chairman suggested that for the future meeting arrangement, it is highly appreciated if each section/division including Langkawi DOF District office and KEN to prepare a written information paper/report to be discussed in the meeting. Such an arrangement is viewed as more systematic and efficient.

### **8. Closing**

The Chairperson thanked all participants for their valuable contribution and constructive comments and would like to meet at the next SC meeting in Chumphon, Thailand.

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Drafted by: Sumitra Runagsivakul, 18 December 2006  
Endorsed by: Sei Etoh, 5 January 2007/01/05  
Endorsed by: Abdul Rahman Abd. Wahab, 29 January 2007