

Bi-annual Project Progress Report  
of  
Integrated Coastal Resources Management in Sihanoukville  
(ICRM-SV)  
January-June 2007



Training Department  
Southeast Asian Fisheries Development Center

TD/RP/107  
ICRM-SV No. 7

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## **1. GENERAL ACCOUNT**

Formulation of the Community Fisheries Management Plan was completed and submitted to the Governor of Sihanoukville Municipality for *Prakas*.

Preliminary survey for the establishment of fish refugia was conducted.

The activity of the Local Enforcement Unit was strengthened further.

The women's groups activity on mushroom production was reviewed which concluded with positive result, while mushroom production was continued in 2007 using their own revolving funds.

An experimental activity on mud crab fattening was conducted.

Fish landing data collection has been continued.

The 3<sup>rd</sup> Steering Committee (SC) meeting was held.

The 4<sup>th</sup> Implementation Coordinating Committee (ICC) meeting was held.

Various training courses were conducted, placing particular emphasis on site practical training.

A film in DVD format, demonstrating the project activity was completed.

## **2. ACTIVITIES**

The project has progressed on the right track as shown in the project activity monitoring sheet (Annex 1).

During the 3<sup>rd</sup> Steering Committee (SC) meeting, the representative from the Agriculture Department, Sihanoukville Municipality, stated that the activities implemented by the project ICRM-SV were exactly consistent with the Royal Government Policy in Poverty Alleviation as well as the strategy of the Ministry of Agriculture, Forestry and Fisheries; and that the Agriculture Department committed its full support to the project.

### **2.1 Baseline/monitoring survey**

#### Fish landing data collection

Fish landing data collection has been regularly conducted everyday by designated enumerators at fish landing stations and the data collected have been sent to SEAFDEC/TD for analysis and compilation.

The analysis and compilation of the data in 2006 by SEAFDEC/TD has not yet been completed as scheduled.

### **2.2 Encourage and extend locally based fishery resources management**

#### Community Fisheries Area Management Plan (CFAMP)

The final draft of the CFAMP and other related documents such as the Internal Law (I/L), By-Laws

(B/L) and the Community Fisheries Zoning Map (CFZM) were signed by the series of local administration offices and eventually submitted to the Governor of Sihanoukville Municipality toward the end of 2006 with the following chronological sequence.

1. 05 Sept. 2006: Mr. Rim Mou Soeur, the chief of Community Fisheries signed.
2. 05 Sept. 2006: Mr. Li Del, Village chief of Prek Sangke signed.
3. 11 Sept. 2006: Mr. Phuon Nam, Sangkat Chief signed.
4. 13 Sept. 2006: Mr. Nip Sophal, Deputy Governor of Prey Nub District signed.
5. 26 Sept. 2006: Mr. Doung Sam Ath, Director of Fisheries Department, SHV, signed.
6. 04 Oct. 2006: Mr. Ke Pha, Deputy Director of Agriculture Department, SHV, signed.

Then, the drafts were eventually signed by H.E Say Hak, Governor of Sihanoukville, on 17 Jan 2007.

This procedure was recognized as a temporary measure for the implementation of CFAMP pending an official gazette (*Prakas*) for the new Fisheries Law. However, promulgation of the CFAMP by the Sihanoukville Municipality was not realized during this reporting period. However, it was understood that the CBRM activity can implement based on the draft regulation as the transitional measures.

As discussed at the 3<sup>rd</sup> SC meeting, the Community Fisheries Coordination Committee (CFCC) was established to pursue fisheries resources management matters consistent with the provisions in the Sub-Decree of Community Fisheries. While in the past, there was certain confusion among the SC members on the expected roles of CFCC and the Community Fisheries Committee (CFC), after a clarification was made by the officer of CFDO, FiA, the members understood the need for the timely formation of the CFCC. It was further agreed that in the mean time the Implementation Coordinating Committee (ICC) would perform the functions of the CFCC.

#### Local Enforcement Unit (LEU)

The project continued supporting the voluntary activity of the Local Enforcement Unit (LEU) in patrolling the project site area. As the result, cases of encroachment by illegal fishers and violations of the fisheries regulations have been evidently reduced. The record of arrests compiled by LEU for 2007 will be reported in December 2007.

#### Establishment of fish refugia

Since the coastal fishery resources management concept includes the establishment of fish *refugia* in the project operational area, a workshop to discuss fish *refugia* was held on 27 December 2006 in Sihanoukville with 20 concerned officers and representatives from the communities participating. As agreed during the workshop, a preliminary survey to investigate the social and practical impacts of the establishment of *fish refugia* was conducted in the project operational area by the designated team on 10 June 2007. The result of this survey concluded with recommendations that two fish *refugia* should be established for blood cockle and sea grass in Khos Angkor and Khos Krous, respectively, and that the introduction of fish enhancement devices developed by SEAFDEC/TD should also be made. The report on the survey is attached as Annex 3. This study, however, was conducted based only on the local knowledge and experiences of fishermen with no scientific basis. Thus, as a next step a scientific research on the establishment of fish *refugia* will be carried out.

The establishment of fish *refugia* is part of a movement under the UNEP/GEF regional project on Establishing a Regional System of Fisheries Refugia, which aims to develop several fish *refugias*

in the coastal zones from Cambodia to Vietnam.

## **2.3 Promotion of local business ventures**

### **2.3.1 Cottage-scale industry by women's groups**

#### Mushroom production

The cottage-scale mushroom production has been promoted further and in order to evaluate its viability as an economic venture, a one-day workshop on "Economic evaluation of mushroom production" was held in the project site on 27 February with 18 participants. At this workshop, the group leaders presented their transactions since the inception of the activity until December 2006 based on their accounting records. A brief description of the economic analysis of the groups' activities based on their transactions that were evaluated from the economical as well as practical points of view is summarized as follows.

- a) Kampong Chin – Mushroom production for 6 months in 2006 was 1,015 kg. This group had the best and sound business transaction among the 5 groups with a gross income of Riel 1,361,333 (USD340.30) and a total share distribution of Riel 527,066 (USD 131.80) for its 5 members. The economic return of investment was 166.0%.
- b) Prey Sangke – Production for 6 months in 2006 was 627.4 kg with a gross income of Riel 6,433 (USD 1.60). The actual net profit was Riel 5,146 (USD 1.30).
- c) Prey Pros – The group split due to friction among its members especially on the selection of the location for its processing yard. The first group produced spore bags until September and thereafter the processing equipments were transferred to another location where the newly organized group started its production. The first group produced 136.4 kg of mushroom for 6 months while the second group produced 159.0 kg from October to December 2006. As a result, the first group had deficits in their operation [-Riel 678,500 (-USD169.60)] while the second group had a gross income of Riel 70,483 (USD 17.60).
- d) Prey Toal – Production for 6 months in 2006 was 523.9 kg. The gross income also showed a deficit amount of -Riel 90,600 (-USD 22.70).

From the above results, the project is still optimistic about the future operations even if three groups showed negative economic returns. Although still an experimental trial but upon seeing that the group in Kampong Chin and the new group in Prey Pros had positive economic returns, all the women's groups indicated their willingness to continue a full swing mushroom production in 2007.

In the presentation of the accounting records at the workshop, it was noted that some errors occurred in the bookkeeping and accounting entries in their books of account. In order to correct the wrong entries and miscalculations, a follow-up on-the-spot training on bookkeeping and accounting was conducted on 28 February in each village. After all the errors were rectified, new accounting books were initiated for 2007.

Monitoring the proper implementation of bookkeeping and accounting systems by the groups has been continued by scrutinizing each accounting book every time the SEAFDEC team visits the project site. Through this exercise the economic sense among the members of women's groups on local business ventures could be fostered.

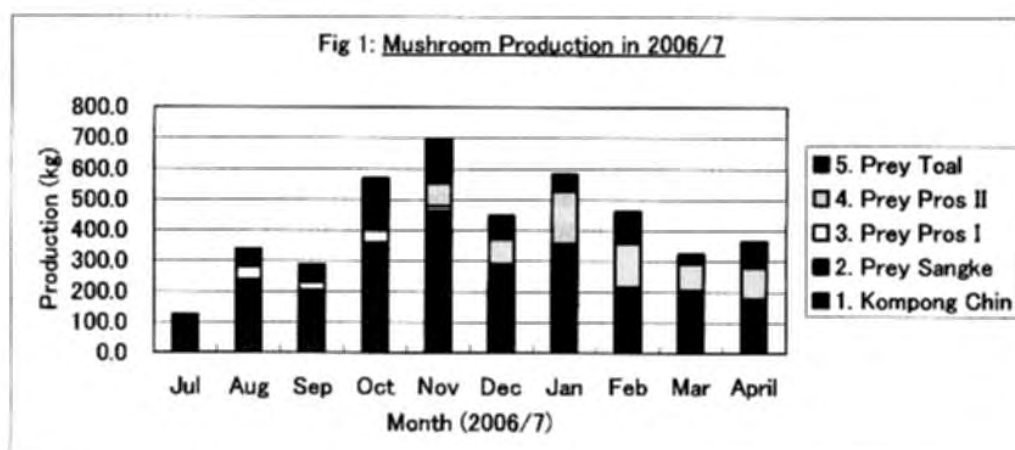
The detailed description of the mushroom production in 2006 and the summary of the economic analysis are shown in Annex 2. A more profound description and analysis are included in the report on “Women’s Group Activity in Production of Mushroom” (Etoh S. June 2007).

So far the financial outcomes of the mushroom production in 2006 showed a positive result, especially with the groups of Kampong Chin and Prey Sangke. In order to best utilize their profit, a separate account called Saving Accounts was opened for these two groups from January 2007. An on-site training was held on 24/25 April 2007 for the opening and managing this new account, the initial fund of which was retroactively transferred as of 1<sup>st</sup> January 2007. This saving account was meant to be used as revolving fund for other business ventures such as a credit scheme and other profitable ventures. Initial funds of Riel 1,465,934 and 139,660 were transferred from the general accounts of the Kampong Chin group and Prey Sangke group, respectively.

The mushroom production record (in kg) as of April 2007 is shown in Table 1.

Table 1 Mushroom production in 2006/7

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April
1. Kompong Chin	66.0	153.0	112.3	237.5	295.5	150.5	204.8	121.3	124.7	117.0
2. Prey Sangke	23.0	85.7	92.1	122.9	168.4	135.3	151.5	93.5	80.5	59.9
3. Prey Pros I	8.0	42.6	26.0	40.4	14.3	5.1	-	-	-	-
4. Prey Pros II	-	-	-	6.5	72.5	80.0	171.5	143.5	87.5	102.5
5. Prey Toal	26.7	56.5	56.7	161.5	146.5	76.0	54.0	102.0	30.0	86.5



As shown in Table 1 and Fig. 1, mushroom production levels in March and April were declining, which was due to high temperature and dry weather. Since it has been claimed that the optimum temperature for growing mushroom is around 28°C and that production is more appropriate with damp air, it was therefore known from the beginning that mushroom production is more suitable during wet and cool seasons. With such conditions, it is expected that the women’s groups would resume mushroom production after the rainy season sets in.

#### Other business

For the maximum utilization of the funds derived from the mushroom production savings, the concerned women’s groups started to diversify in other local business ventures such as rice trading and animal raising which have been flourishing with the Kampong Chin group. Motivated only by themselves, such ventures should be encouraged further.

### 2.3.2. Mud crab culture

Construction of the mud crab ponds which began in October 2006 was completed in January 2007. However, from the outset there was some confusion in the construction of the ponds especially the pond measurements so that when the Japanese Embassy mission visited the project site on 9<sup>th</sup> January 2007 to inspect the progress of pond construction work, they pointed out the irregularities. Thus, the pond layout was subsequently rectified based on factual figures and the specifications of relevant equipment were also amended accordingly.

In addition, the necessary additional construction works which were suggested by a Thai crab culture consultant who visited the site on 9/12 January 2007, were proposed to be incorporated in the original budget for consideration of the Embassy of Japan in Cambodia. The additional works that included putting up of support poles for the asbestos sheets to protect crab from escaping and installing a fence around the ponds were subsequently approved and thus, were carried out in February and March 2007.

As a qualified expert on mud crab culture was not available in Cambodia, an expert from the DOF of Thailand traveled to the site in January 2007 to inspect the construction work of the culture ponds and provided relevant technical suggestions. Taking advantage also of the expert's presence, a training course was held for the mud crab sub-group members on 10 January 2007.

The experiment on mud crab culture (fattening) commenced on 13 February 2007 by stocking 460 juvenile crabs with average weight of about 79.3 g. On 14 February 2007, another 890 juvenile crabs were purchased and stocked in separate two ponds grouped by sex. On 4 March 2007, an additional 800 juvenile crabs which were confiscated from illegal fishers were also stocked in another pond.

Immediately after the commencement of this trial, a training course on simple bookkeeping and accounting systems was conducted for the Crab Culture Sub-Group (CCUSG) on 28 February 2007 at the project site with 12 members of CCUSG and the Chairman of the Community Fisheries Prey Nup II participating. During the training, the following accounting books which were introduced for the members to maintain through demonstration and repeated practical exercises:

1. Daily Culture Logbook
2. Seed Purchase Record
3. Crab Sales Record
4. Labour Ledger
5. General Ledger
6. Monthly Stock Record

Moreover, the participants were also trained in measuring the water salinity of the ponds using a salinometer, and in measuring the dissolved oxygen by DO meter and pH by litmus indicator papers. These routine activities were demonstrated to them by an extension officer.

The crab culture experiment was conducted by the members of the Crab Culture Sub-Group comprising 12 fishermen. Each day two members performed the duty of feeding the stocks twice a day, measuring the water temperature and salinity, routine patrolling, etc. The results of their observations and the measurements taken from this experiment are recorded in the crab culture logbook every day.

In the course of the experiment, it was observed that the salinity of water in the ponds was as high

as 30-35 ppt corresponding to the increased water temperature especially after April. Parallel with such phenomenon, it was also observed that the number of dead crabs increased daily. Since the rate of mortality was increasing, it was decided to harvest the remaining crabs even if some were not yet fully grown. It has been noted that crabs weighing up to 200 g at minimum classified as second grade could still be sold at higher prices in the markets fetching Riel 17,000/kg than the third grade (under 200 g) which could be sold at Riel 9,000/kg.

The first harvest was done on 23 May with 11.6 kg (51 pcs) of crabs harvested from 4 ponds and sold in the Veal Rinh market at Riel 9,000/kg and 17,000/kg for grade 3 (under 200 g) and grade 2 (200-400 g), respectively. In ponds No. II to IV, the remaining marketable sized crabs were sold towards the end of June while some small ones were transferred to pond No. V for further fattening. Table 2 shows the result of the 3-month crab culture from February to May 2007.

Table 2: Mud crab culturing experiment in this period  
(February to June 2007)

Pond No.	Discharged (pc)	Harvested (pc)	Transferred (pc)	Lost (pc)			Survival rate (%)	Feed supply (kg)	Remarks
				Dead	Missing	Total			
I	405	19	70	265	51	316	22.0%	259.0	Transferred to P.5
II	395	34	23	261	77	338	14.4%	277.0	Transferred to P.5
III	733	35	45	286	367	653	10.9%	502.0	Transferred to P.5
IV	617	15	24	265	313	578	6.3%	421.0	Transferred to P.5
V	162	35	0	0	0	0	-	53.0	Remained 127 pcs. *
Total	2,312	138	162	1,077	808	1,885	-	1,512.0	

\* With assumption

As shown in Table 2, the survival rates of crabs in four ponds were extremely low considering that the established survival rate for mud crab culture in commercial scale is around 85%. The result of the experiment certainly made negative financial returns. A major cause of the failure seems to lie in high water temperature and salinity since it was observed in April and May that the water temperature reached 32°C and salinity to 38 ppt when the optimum temperature for the culture should be 23-30°C and optimum salinity of 10-30ppt. In the original plan of operation prepared by a JICA Expert, water in the ponds should be circulated by daily pumping to maintain the optimum temperature and salinity. However, since water pumping would cost as high as USD 2,000 per season (6 months) accounting for 56% of the gross income from sale of the crabs, it was decided to inevitably rely on natural water circulation in order to partially overcome the rising water temperature and salinity. Nevertheless, deepening of the ponds was undertaken as suggested in order that water temperature and salinity could be decreased to some extent. Re-construction to deepen the ponds has therefore been undertaken and should be completed before the next full scale production would begin. As learned from the project, concerns such as lack of expertise in mud crab culture and technical supervision were considered very critical.

The whole operation will be scrutinized again considering the technical as well as the economic angles and a report on this experiment will be prepared. In addition, a technical consultation will be conducted with a mud crab specialist to analyze the results of this experiment before a full scale operation starts.

#### 2.4 Enhance human resources capacity and participation

As afore-described, a refresher training course on bookkeeping and accounting system was



conducted on 24/25 April and the workshop on "Economic evaluation in mushroom production in 2006" was held on 27 February.

The training course in mud crab culture was conducted for the crab culture sub-group on 10 January. Also, a training course on the introduction of simple bookkeeping and accounting system was conducted for the sub-group on 28 February.

During this reporting period, more emphasis was placed on site training especially in the improvement of the bookkeeping and accounting systems applied by the women's groups. It was because of such efforts that preciseness of entering data in the accounting books has been noticeably improved, especially for the group in Kampong Chin.

## **2.5 Rehabilitate and enhance coastal resources**

### Establishment of the fish refugia

As reported in 2.2, establishment of fish *refugia* in the project operational area has been initiated as a case study, partly in relation to a UNEP/GEF regional project on "Establishing a Regional System of Fisheries Refugia". The preliminary survey conducted in June 2007 recommended the establishment of two fish *refugias*; i.e. one each for blood cockle and sea grass.

In addition, the preliminary survey also recommended the introduction of fish enhancement devices developed by SEAFDEC/TD in the zone of the fish *refugia*. This recommendation however, needs to be discussed further with the authorities concerned because in the Cambodian Fisheries Law, any physical installation in their waters is prohibited.

### Mangrove reforestation

At the 4<sup>th</sup> ICC meeting on 23 May 2007, the implementation of mangrove reforestation program was discussed in line with the project action plan. At this meeting it was agreed that a mangrove planting occasion be organized where the fishermen and school children could participate voluntarily in planting the trees in collaboration with FiA, local authorities and the project. In addition, prior arrangements like preparation of seedlings and locating the areas to be covered should be coordinated by the project.

Thus, the Mud Crab Sub-Group initiated in May the experimental sowing of seeds near the crab culture ponds for the production of mangrove seedlings. This activity should be further extended.

## **2.6 Fishing/fish handling technologies development**

Since this activity has been considered a low priority, no specific activity has been pursued during the reporting period.

## **2.7 Project management meeting**

### Steering Committee Meeting

The 3<sup>rd</sup> Steering Committee Meeting was held on 1<sup>st</sup> March 2007 in Sihanoukville with representatives from the Embassy of Japan in Cambodia participating as well. During the meeting, it was reported that the extension of the project for one year from December 2007 to December 2008 was approved at the 29<sup>th</sup> SEAFDEC Program Committee Meeting held in Bangkok on 4-6 December 2006. In conjunction with the extension of the project tenure, the project work plan which was revised accordingly was presented to the meeting. After the deliberation, the project work plan was endorsed. At this meeting, the DOF of Cambodia also highlighted their intention to

have the Community Fishing Area Management Plan in place in the community and confirmed its interest in establishing and trying out the concept of fish *refugia*. In this regard, SEAFDEC/TD agreed to conduct the scientific research as shown in the detailed contents of the discussion in Annex 4: Minutes of the 3<sup>rd</sup> SC Meeting.

#### Implementation Coordinating Committee (ICC) meeting

The 4<sup>th</sup> ICC meeting was convened on 23 May 2007 in Sihanoukville, where the progress made since the last ICC meeting was reported and pertinent issues were raised to seek solutions at the local level. Also, the immediate action plan for the succeeding 4 months was discussed in detail. The major issues raised at this meeting include: alternative fish culture after the rainy season sets in, establishment of fish *refugia*, mangrove reforestation, study tour to selected CF in Siem Reap Province, etc. The detailed discussions at this meeting are included in Annex 5: Minutes of the 4th ICC meeting, which was prepared in both Khmer and English languages.

### **2.8. Other activities**

Aimed at producing PR materials for the project operation, film shooting of the project activity was made on 22-24 May 2007 at the project site. Various project activities were compiled in the 15-min film for distribution to relevant parties and screening during pertinent occasions.

## **3. OUTCOMES**

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

#### Baseline/monitoring survey

- The regular fish landing data collection exercises produced monthly fish landing data.

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

- The final draft of CFAMP was submitted to the Governor of Sihanoukville Municipality for approval and for subsequent gazette.
- Consensus for the establishment of Community Fisheries Coordination Committee (CFCC) was reached.
- The activity of the Local Enforcement Unit (LEU) has been further strengthened. As a result, the number of illegal fishers and violators has been reduced.
- Preliminary study on the establishment of fish *refugia* was conducted.

#### Promotion of local business

- The women's group workshop on evaluation of mushroom production was held, where a self-evaluation of mushroom production in 2006 was made based on the figures derived from their accounting books.
- As the result of the above economic and practical evaluation, the women's groups were confident to continue mushroom production in 2007.
- Mushroom production produced a total yield of 1,730.7 kg for 4 months from January to April 2007, considered a high production level in spite of the dry season.
- From the result of their transactions in 2006, two groups initiated their saving accounts with initial funds derived from their profits in mushroom production.
- Manual on mushroom production was prepared for publication.
- The construction of mud crab culture ponds was completed with financial support from the Embassy of Japan in Cambodia.

- Training courses in mud crab culture practice was conducted.
- Training course in simple bookkeeping and accounting for mud crab culture was conducted.
- The experiment on mud crab culture which began in February resulted in untimely harvest in May with not very promising results.

#### Enhance human resources capacity and participation

- Various training courses and workshops were conducted.
- The sense of production and business management in a cottage scale industry has improved among the women's groups.
- Mangrove planting was identified as a voluntary activity which is part of a community development work.

#### Rehabilitate and enhance coastal resources

- A preliminary study on the establishment of fish *refugia* in the project operational area was conducted.
- Experimental seeds sowing for mangrove seedlings production was initiated.

#### Project management meeting

- The 3<sup>rd</sup> SC meeting was held on 1 March.
- The 4<sup>th</sup> ICC meeting was held on 23 May.

### **4. MAJOR CONSTRAINTS**

The experiment on mud-crab culturing was conducted from February to June. The result ended up failure. It is apparent that the shortage of expertise specific to mud-crab culturing technologies is responsible. The overall review on the whole process should be made and, based on the outcomes, remedial measures to improve the survival rate of mud crab should be sought before beginning the full swing operation in November 2007. Meantime, it should be ensured that the technical backstopping on mud crab culturing be available.

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

The work plan covering 6 months from July to December 2007 is described as follows.

#### Baseline/monitoring survey

- Continue fish landing data collection
- Analysis of the fish landing data in 2006

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

- Upon approval of CFAMP, the resources management measures would be implemented.
- Reinforcement of the structure and capacity of Local Enforcement Unit (LEU)

#### Promotion of local business

- Further promotion of mushroom production
- Promotion of Saving accounts
- Continue mud crab culture in ponds
- Finalization of the financial report for the Grassroots Fund to be submitted to the Embassy of Japan in Cambodia

- Review of mud crab culture experiment
- Based on the above, renovation of the ponds be made
- Commencement of alternative fish culture methods during rainy seasons

#### Enhance human resources capacity and participation

- Study tour to inspect the community base resources management exercises in other parts of the country
- Reinforcement of the structure and capacity of CFPN2
- Identify community based volunteer work
- Publication of PR materials and putting up project signboard

#### Rehabilitate and enhance coastal resources

- Study and promote the establishment of the fish *refugia*

#### Project management meeting

- Preparation of the 5<sup>th</sup> ICC meeting to be held in September 2007

#### Mid-term project evaluation

- Identification of relevant outsourced consultant
- Entering into contract agreement
- Conduct of mid-term project evaluation

#### Other activity

- Participation in the Regional Seminar on Integrated Coastal Resources Management in Southeast Asia to be held on 10-12 July in Chumphon, Thailand

## 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>Author</u>	<u>Date of issue</u>
01.	Travel Report to Sihanoukville in March 2007	Sumitra R.	April 2007
02.	Travel Report to Sihanoukville on 23-25 April 2007	Sumitra R.	May 2007
03.	Minutes of 3 <sup>rd</sup> SC Meeting	Yos C.	May 2007
04.	Minutes of 4 <sup>th</sup> ICC Meeting	Yos C.	June 2007
05.	Women's Group Activity in Production of Mushroom	Etoh S.	June 2007
06.	Report on Preliminary Survey on Fish Refugia in CF Prey Nup II	Chanda M. <i>et. al</i>	June 2007

**Annex 1: Project Activity Implementation Chart for ICRM – SV in 2007**

Revision : "0"  
As of 30 June 2007

←.....→ Activity planned  
←====→ Activity actual

Activity	2007												Remarks	
	1	2	3	4	5	6	7	8	9	10	11	12		
<b>1. Baseline / monitoring survey</b>														
<b>1.1. Fish landing survey at the project site</b>														
1.1.1. Regular collection of fish landing data	←.....→												Continued activity	
1.1.2. Analysis and compilation of data and information				←.....→										Data in 2006
<b>2. Encourage and extend locally-based fishery resources management</b>														
<b>2.1. Community Fisheries Area Agreement (CFAA)</b>														
2.1.1. Submit CFAA to FIA for consideration	←====→													To Shihanoukville Governor
2.1.2. Approval of CFAA by FIA			←.....→											
2.1.3. Formation of Community Fisheries Coordination Committee (CFCC)			←.....→											Pending for the time being
2.1.3. Practical application of CFAMP					←.....→									Continued activity
<b>2.2. Local enforcement unit (LEU)</b>														
2.2.1. Reinforcement of the LEU's activity	←.....→												Continued activity	
<b>3. Promotion of local business</b>														
<b>3.1. Cottage scale industry by women's groups</b>														
3.1.1. Monitoring mushroom production	←.....→												Continued activity	
3.1.2. Identify the second local business								←.....→						
<b>3.2. Mud crab aquaculture business</b>														
3.2.1. Running mud-crab culturing business	←.....→										←.....→			During dry seasons
3.2.2. Running tilapia culturing business							←.....→						Initiated with digging ponds	
3.2.3. Evaluation of the above business										←.....→				
<b>4. Enhance human resources capacity and participation</b>														
<b>4.1. Reinforcement of structure and capacity of existing Prey Nup II CF (PN2CF)</b>														
4.1.1. Technical guidance for PN2CF	←.....→												Continued activity	
4.1.2. Study tour to inspect a model case on CBFMR			←.....→											
<b>4.2. Participation in community development work</b>														
4.2.1. Identification of the community development and CBFMR voluntary work	←.....→													Magrove reforestation
4.2.2. Implementation of the community development and CBFMR voluntary work				←.....→										
<b>4.3. Publication and PR materials</b>														
4.3.1. Publication of reports and manuals	←.....→												As required	
						←====→								Mushroom manual
4.3.2. Distribution of PR materials	←.....→												As required	

Activity	2007												Remarks	
	1	2	3	4	5	6	7	8	9	10	11	12		
5. Rehabilitate and enhance coastal resources														
5.1. Establishment of conservation area														
5.1.1. Study on establishment of conservation area			←.....→											
	←													
5.1.2. Establishment and maintenance of conservation area														
				←.....→										Continued activity
6. Fishing / fish handling technologies improvement														
6.1. Identification of necessity on fishing and fish handling technologies improvement														Continued activity Lower priority
	←.....→													
6.2. Implementation of improving fishing or fish handling technology.														Continued activity Lower priority
	←.....→													
7. Project management meeting														
7.1. Steering Committee (SC) meeting	←→													
		↔												
7.2. Implementation Coordination Committee (ICC) meeting			↔					↔				↔		
					↔									
8. Project evaluation														
8.1. Mid-term project evaluation				←.....→										

Annex 2 - 1

Mushroom Production Record in 2006 - Summary

Revised on 25.04.2007

No.	Item	Group					Total		Remarks
		Kampong Chin	Pray Sangke	Pray Pros I	Pray Pros II	Pray Total	(in Riel)	(in USD)	
1	Produced (Kg)	1,014.8	627.4	136.4	159.0	523.9	2,461.5		
2	Sold (Kg)	1,014.8	627.4	136.4	159.0	523.9	2,461.5		
3	Sales (Riel)	2,750,000	1,646,000	440,000	395,400	1,409,900	6,641,300	1,660	
4	Expenditure (Riel)								
	- Fixed (equipment)	820,000	669,400	573,000	395,000	981,000	3,438,400	860	
	. Paid by SEAFDEC	687,000	654,000	433,000	116,000	891,000	2,781,000	695	
	. Paid by Group	133,000	15,400	140,000	279,000	90,000	657,400	164	
	- Variables (materials)	1,216,000	1,518,000	1,007,000	272,000	1,311,000	5,324,000	1,331	
	. Paid by SEAFDEC	1,190,000	1,404,000	981,000	187,000	1,311,000	5,073,000	1,268	
	. Paid by Group	26,000	114,000	26,000	85,000	0	251,000	63	
	- Other (e.g. social welfare)	36,000	10,000	16,000	20,000	26,000	3,000	1	
	Sub-total	2,072,000	2,197,400	1,596,000	687,000	2,318,000	8,870,400	2,218	
5	Labour contribution								
	- Attendance to work (hr)	1,295	600	1,060	1,832	1,555	4,467		
	- Paid as share (hr)				0	800,000	1,300,000	325	
6	Average Price per Kg (Riel)	2,710	2,624	3,226	2,487	2,691	2,698	0.67	

Annex 2 -2

Calculated Profit and Loss Analysis in Mushroom Production of 2006 (Summary)

Revised in April 2007

No.	Item	Kampong Chin			Group			Total			Remarks
		Prey Sangke	Prey Pros I	Prey Pros II	Prey Pros I	Prey Pros II	Prey Total	(in Riel)	(in USD)		
1	Sales (Riel)	2,750,000	1,646,000	440,000	395,400	1,409,900	6,641,300	1,660.3			
2	Incurring expenses (Riel)	1,388,667	1,639,567	1,118,500	324,917	1,500,500	5,972,151	1,493.0			
	- Depreciation of facilities	136,667	111,567	95,500	32,917	163,500	540,151	135.0			
	- Variables (materials + social welfare)	1,252,000	1,528,000	1,023,000	292,000	1,337,000	5,432,000	1,358.0			
3	Gross income (Riel)	1,361,333	6,433	-678,500	70,483	-90,600	669,149	167.3			
4	Saving for investment (Riel)	272,267	1,287	0	0	0	273,553	68.4			
5	Net income (Riel)	1,089,066	5,146	-678,500	70,483	-90,600	395,596	98.9			
6	Reserve for the year of 2007 (Riel)	562,000	546,940	0	519,500	578,100	2,206,540	551.6			
	- Repair and maintenance of facilities	82,000	66,940	0	39,500	98,100	286,540	71.6			
	- Revolving fund for 2 months' operation	480,000	480,000	0	480,000	480,000	1,920,000	480.0			
7	Available share in 2006 (Riel)	527,066	-541,794	-678,500	-449,017	-668,700	-1,810,944	-452.7			
8	Shares already distributed (Riel)	500,000	820,000	0	0	800,000	2,120,000	530.0			
9	Net amount share after deduction of paid amount	27,066	-1,361,794	-678,500	-449,017	-1,468,700	-3,830,944	-982.7			
10	Cash in hand on 31 December 2006(Riel)	2,055,000	688,600	258,000	11,400	493,900	3,504,900	876.2			
11	Actual amount to be saved / reserved (Riel)	2,027,933	688,600	0	11,400	493,900	3,219,833	805.0			
12	Balance (yet to be distributed to members)	27,067	0	258,000	0	0	285,067	71.3			
13	Transfer to Saving account	1,485,934	139,660	0	0	0	1,605,594	401.4			
14	Economic return against capital (%)	166.0%	1.0%	-118.4%	17.5%	-9.2%					



**Report  
on  
Preliminary Survey on Fish Refugia in CFs Prey Nub 2**

Meas Chanda  
20n June 2007

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**1. Introduction**

In the wake of the 4<sup>th</sup> ICC meeting 23 May 2007, Director of Fisheries Office, Sihanoukville instructed the office technical group to carry-out consultation on possibility of establishing fish refugia in CFs Prey Nub2. The consultation was conducted based on the previous study by Mr. Meas Chanda and Mr. Nen Chamrouen. The consultation was conducted based on the following objectives:

1. To gather information on socio-economic, biological and management issues based on fishermen experiences
2. To determine the coverage area of sea grass and blood cockle for establishing fish refugia.
3. To identify the applicable devices for establishing fish refugia

**2. Methodologies**

To harmonize different ideas on refugia development among fisheries officers, CFs and local authorities, a group consisted of concerned stakeholders was jointly discussed and visited proposed site. The group members were listed as bellow:

1. Mr Duong Sam Ath            Director of fishery office, Sihanouk Ville.
2. Mr. Meas Chanda            Deputy Director of fishery office of Sihanouk Ville.
3. Mr. Yos Chanthanna        Project team leader.
4. Mr. Neng Chamreng        Chief of CF section
5. Mr.Chhun Thol                Head of Inspection Unit, Prey Nub Districts
6. Mr. Li Del                    Chief of Prek Sangke village
7. Mr. Rim Mouserger,        Head of CFs Prey Nub2
8. Ten Members of CFs Committee.
9. Representative from Bek Krong community fisheries

**3. Findings and discussion**

According to the survey result, fisheries office proposed 2 fish refugias: (1) blood cockle area and (2) Sea grass area.

**3.1 For blood cockle:**

It locates in Khos Angkor mud flat which covers around 7 hectares of blood cockle area

**a. Biological characteristics**

According to experiences from fishermen, blood cockles start breeding from October to March. During this time, fishermen found that small reach the size of 8,000 to 12,000pcs per kg. Moreover, fishermen noticed that where they found one kind of sponges<sup>1</sup> exist, they found high density of small blood cockles. Fishermen said we cannot found blood cockle if this sponges disappear. So

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<sup>1</sup> This specie need to be clarified by expert. Normally fishermen called cockle mother.

the group concluded that this specie plays a very important role as nursery ground or habitat for blood cockle and need to be protected. Push net and clam drag net using engine were considered as the threat for this habitat.

Based on biological characteristics, the fisheries office proposed a refugia plan which prohibited blood cockle fishing from October to March except collecting blood cockles by hands. Illegal fishing must be prohibited.

**b. Socio-economic impacts.**

Fishermen use some fishing gears such as crab trap, shrimp gill net, fish gill net, hand-push net and bivalve collection by hand. Illegal fishing activities are prevailing in CF fishing ground such as push net and clam drag net using engine. Hence, the proposed time for not allowing catching blood cockle from October to March as mentioned above will not impact negatively on the current fishing practices because other legal fishing activities are allowed to catch fish as usual.

**c. Management Issues**

The group justified that prohibited time for blood cockles fishing is manageable and applicable because people can collect big blood cockles by hand and other fishing activities still operate in this area. The group suggested to install fish enhance device to protect habitat and enhance fisheries resources. The FED should be carried by experts and need to be study more detail on it.

**3.2 Sea grass area**

It extends from Khos Krous to Trapang Ropove estuary covering around 12 hectares of sea grass. According to experiences from fishermen, sea grass exists where the bottom is mud-sand. In the sea grass bed, fishermen found abundance of swimming crabs, shrimps, and mullet .etc. This area is a part of CFs Prey Nub 2, so the socio-economic condition is similar with blood cockle area.

In this area, all kinds of illegal fishing must be prohibited. To achieve this objective, FED has to be introduced because it is difficult to crackdown illegal fishing.

**4. Conclusion and recommendations**

Fish refugia for blood cockle and sea grass are very essential to enhance fisheries resources for improving CFs livelihoods through their involvements in fishing. FED should be introduced in the designed refugia because it is efficient to prevent from illegal fishing activities in CFs fishing ground. To establish fish refugia properly, the group suggested some ideas as bellow:

1. SEAFDEC/TD should invite an expert for further study in scientific way.
2. The study should be included FED design, cost of construction
3. The study should find out the impact of FED on fishing practices of CFs

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Drafted by: Fisheries Office Technical group (01.06.200)

Endorsed by: Doung Sam Ath, Director of Fishery Office, SV (20.06.2007)

Translated from Khmer to English by: Mr. Va Longdy (30.06.2007)

## Annex 4

### **Minutes of the 3<sup>rd</sup> Steering Committee (SC) Meeting** Integrated Coastal Resources Management in Sihanoukville (ICRM-SV)

**Venue:** The meeting room, Agriculture Department, Sihanoukville, Cambodia

**Date:** 01<sup>th</sup> Marc 2007

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#### **1. List of Participant**

##### DOF, Cambodia

- |                       |   |
|-----------------------|---|
| 01. Mr. Ing Try       | Deputy Director General, DOF, PP            |
| 02. Mr. Ke Pha        | Deputy Director, Agriculture Department, SV |
| 03. Mr. Duong Samath  | Chief, Fishery Office, SV                   |
| 04. Mr. Pich Bunna    | Vice Chief, Community Development Office    |
| 05. Mr. Yos Chanthana | Team Leader/Marine Biologist                |
| 06. Mr. Ros Vuthy     | Vice Chief, Administration Office           |
| 07. Mrs. Heng Punley  | Fishery Officer, CFDO, DOF, PP              |
| 08. Meas Chanda       | Vice Chief of Fisheries Office, SV          |
| 09. Yi Boros          | Aquaculturist, SEAFDEC staff                |
| 10. Nen Chamroeun     | Chief Community Development Section, SV     |

##### SEAFDEC/TD

- |                              |                             |
|------------------------------|-----------------------------|
| 11. Mr. Sei Etoh             | Project leader              |
| 12. Ms. Sumitra Ruangsivakul | Socio-economic Section Head |

##### Japanese Embassy

- |              |                             |
|--------------|-----------------------------|
| Mr. Kubayshi | Second secretary of Embassy |
| Mr. Yashuda  | Embassy staff               |

#### **2. Contents of meeting**

##### **2.1. Welcome address:**

- Mrs. Heng Punley addressed information on the agenda of the meeting and the objectives followed as below:
  - to endorse the biannual project progress reports for 2006
  - to endorse the proposed work-plan for 2007
  - to discuss other issues pertinent to the project management and strategic issue
- She invited Mr. Ke Pha, Deputy Director of Agriculture Department, Sihanoukville, to give welcome speech on behalf of Agriculture Department SV. He expressed sorry for Mr. Nou Ratana, Director of Agriculture Department who was not able to joint this essential meeting because he had meeting in Municipal Hall. He stressed that ICRM-SV activities were consistent with the Royal Government Policy in Poverty Alleviation as well as the Ministry of Agriculture, Forestry and Fisheries policies. He added that as one of the members of the Steering Committee, the Agriculture Department has strong commitment to help the project process usefully. On behalf of Agriculture Department, he would like to express warmly welcome to all participants in this meeting and hope the meeting will achieve the objectives.
- After finishing welcome speech by Mr. Ke Pha, Mrs. Heng Punley invite Mr. Ing Try Deputy Director General of Fisheries Administration to give the opening address of the meeting.

- Mr. Ing Try, on behalf of H.E Nao Thouk, Director General of Fisheries Department, he expressed his appreciations to attend the meeting today. He totally agreed with the welcome speech of Mr. Ke Pha in which he raised the important role of ICRM-SV in poverty alleviation of CFs and natural resources management in a sustainable way. He also motioned that during 6 months operation of the project, there were evidently progresses. The achievements resulted from the physical and mental efforts of the project staffs, SEAFDEC/TD and fisheries office as well as Agriculture Department of SHV. At the end he declared opening 3<sup>rd</sup> Steering Committee Meeting.
- After opening the meeting, Ms. Heng Punley invited Mr. Yos Chanthana, project team leader to present the minute of the 2<sup>nd</sup> SC meeting for endorsement. Mr. Yos Chanthana explained in detail on the minutes and suggested the participants to give comment or make corrections if any phrases should be considered to be corrected. No correction was expressed by the participants and the Minutes was thus endorsed.

## **2.2. Annual progress report for 2006 (Mr Yos Chanthana. Team leader)**

- Mr. Yos Chanthana went on detail about annual progress report for 2006. This report were discussed and commented in a constructive way.
- Mr. Ros Vuthy said that, according to the report the cashier of CF was replaced; do the Fisheries office and the project solve this issue properly? He added that in fisheries sector we need participation from women; so any changes in community fisheries committee members should be followed by election.
- Mr. Doung Sam Ath said that regarding to replacement of the CF cashier, fisheries office did not solely remove her from the current post. He added that the procedures were taken based on the following reasons:
  - a. Ms. Chea Thoeun gave resignation voluntarily to the CFs leader and fisheries office.
  - b. She failed to manage CFs budget properly
  - c. This issue was discussed at the special meeting between fisheries office, SEAFDEC staffs, commune chief, village leader and the community fisheries Prey Nub 2. The participants at the meeting approved the resignation anonymously.
- Mr. Ing Try asked that mushroom cultivation was initiated in Toeuk Tla commune only; can the project introduce this model in other CFs, for instant CF Prey Nub1?
- Mr. Etoh replied that according to the prodoc. the project activities would be implemented in Toeuk Tla only. He continued that the project started calculating the economic viability of mushroom cultivation in the four villages. The project staffs conducted a survey to identify the women's intention in the future of mushroom cultivation. The question was whether they want to continue mushroom production or not. The result was:
  - a. Women's group in Kampong chin was very successful in producing mushroom.
  - b. For Prek Pros there were internal conflicts among group members. Based on results of the production (low productivity) the project decided to break Prek Pros into 2 places so called Prek Pros I and Prek Pros II. After breaking, Prek Pros I completely finish production and Prek Pros II started production in October 2006.
  - c. After introducing bookkeeping, the women 'groups faced difficulties in recording. The results of inspection shown that recorded books were almost incorrect due to lack of

- experiences in accounting. The spot re-trainings by Socio-economists of the project were patiently repeated at each village and as the result the entries have become more accurate.
- d. With guidance from the project staffs, the groups' accounting is considered in right direction.
  - e. To manage a business properly, the women groups must records business transaction accurately.
  - f. During dried season, mushroom productivity is low because of inadequate fresh water, so the women groups should not produce more mushroom at this season.
  - g. The women groups expressed their willing to expand their production capacity, but they faced marketing problems.
  - h. SEAFDEC will support each group to produced 1,000 packages more except Prek Pros II. After that, the groups have to revolve their fund to continue mushroom cultivation.
- Mr. Ing Try recommended that Fisheries Office should take into consideration on CF cashier. He suggested the project team leader to write a report on achievement of the project to Fisheries Administration as well as the Ministry of Agriculture, Forestry and Fisheries.
  - Mr. Ing Try suggest that the project should publish document of mushroom cultivation for disseminate the knowledge and experiences to other provinces. Mr. Etoh replied that after one year of mushroom production, he will publish one year report.
  - Mr. Yos Chanthana said that Prek Sangke wants to give facilities, materials and mushroom back to the project. Mr. Ing Try asked Mr. Yos Chanthana and the project staffs to investigate on this issue to find the reasons.
  - Mr. Yos Chanthana said that, looking back the training time at Vocational Training Center of Battambang, each group was very competitive in learning. They were proud of their groups by committed with the project to work hard in producing mushroom. Why the problem came? In Kampong Chin the group got success with good production, but in Prek Sangke the productivity was lower than Kampong Chin so Prek Sangke group was upset. Moreover, Mr. Keila, an extension worker some time used strong words to this group. Mr. Ing Try suggested the project staff should not use strong words with CFs because he thought that CFs reacted against strong ststatement. Mr. Yos Chanthana defended that Mr. Keila sometimes used strong words with women's groups, but he wanted the group to go on right direction.
  - Regarding to grassroots project, Mr. Ing Try asked Mr. Etoh on whether the activities taken by fisheries office were consistent with the project document? Mr. Etoh replied that in general the results of grassroots project implement were acceptable. But the time for crab stocking in the pond was quite late, so ICRM-SV planned to stock medium size crab around 100g/pcs. He continued that we should not so much worry about failure because it was an experiment case, we would find the reasons behind the failure for improving mud crab culture in the future.
  - Mr. Ing Try suggested Japanese Embassy representatives to visit the project to evaluate whether the construction works were consistent with project document signed by Embassy and Fisheries Office; if the embassy find any mistake the fisheries office will make correction. He stressed that we don't want make any conflicts with the embassy. Mr. Kubayashi agreed to visit the project site as requested by Mr. Ing Try.

### **2.3. Work Plan for 2007 (Mr Etoh Project leader)**

- Mr. Etoh explained in detail on work plan for 2007:

- For fish landing survey, Mr. Etoh said that the survey for 2006 finished and we are preparing report.
  - CFAMP was finalized and sent to the concerned institution for signature.
  - Law enforcement unit was very active in protecting CFs fishing ground. Illegal fishing activities were crackdown.
  - For next year, the project plan to introduce a new business
  - For aquaculture business, during rainy seasons the project will introduce sea bass culture.
  - This year, the project will implement CFAMP.
  - Regarding to study tour, Mr. Etoh suggested FiA to find a successful CF in Cambodia so that the project can bring CF committees to visit.
  - The project will discuss with CFs to find possibility of volunteer works for instant mangrove plantation, beach cleaning....
  - The project will install poster at the four village
  - For fish refugia, FiA organized national seminar on 21.12.2006, he asked the outcomes of the semina.
- Mr. Pich Bunna comments:
    - He expressed his appreciation on the great achievement of the project especially business promotion and publication.
    - He worried about water availability for mushroom cultivation, it may cause obstacles for future production.
    - In the CFAMP, the project used a map with 1/50,000 scale, but according to the guideline the scale must be 1/60,000scale.
    - Every CF in Cambodian is waiting for Prakas from the Ministry of Agriculture, Forestry and Fisheries. We should use the existing one until the Prakas is declared.
    - According to new guideline, the community area agreement will be signed between CF and Khan Fisheries Administration (now provincial fisheries office).
  - Mr. Etoh asked "can we use the CFAMP signed by H.E Minicipal Governor of Sihanoukville? Mr. Ing Try said that we can use it temporarily until Prakas is issued. He also suggested Fisheries Office to evaluate the community fisheries before December 2007 and send the report on evaluation results to the Department of Agriculture SHV, FiA and the Ministry of Agriculture, Forestry and Fisheries. Mr. Pich Bunna said that CFs evaluation is different from project evaluation, so which one is mentioned by Mr. Ing Try? To evaluate CFs, we need participation from CFs, local authorities, fisheries office etc.
  - Mr. Etoh said that the project need to conduct the mid term project evaluation which will be carried out by an out-sourced institution or a consultant apart from the evaluation on activity of the CF that Mr. Ing Try suggested.

#### **2.4. Fish Refugia (Presented by Mr. Meas Chanda)**

- Following instruction from Fisheries office, Mr. Meas Chanda and Mr. Nen Chamroeun conducted preliminary survey on possibility of fish refugia establishment in CFs Prey Nub2. The survey included socio-economic, biological feature and management issue. The survey aimed at avoiding any conflicts happened after establishing fish refugia. The survey was conducted with participation from CFs committee members. Due to lack of experiences in fish refugia, the survey focused only on information getting from fishermen and key informants. Based on this information, full scale of research might be carried out later by experts.

- According to the survey result, fisheries office proposed 2 fish refugias: (1) blood cockle area and (2) Sea grass area.
  - a. For blood cockle: It locates in Khos Angkor mud flat which covers around 7 hectares of blood cockle area. According to experiences from fishermen, blood cockles are abundant from October to March. Fishermen use some fishing gears such as crab trap, shrimp gill net, fish gill net, hand-push net and bivalve collection by hand. Illegal fishing activities are prevailing in CF fishing ground such as push net and clam drag net using engine.
  - b. For sea grass area: It extends from Khos Krous to Trapang Ropov estuarine. It covers around 12 hectares. This area is a part of CFs fishing ground so fishing activities is same as in previous area.
- Mr. Pich Bunna asked the reason why we did not include refugia plan into the management plan. Mr. Ing Try explained the differences between conservation area and fish refugia. Fish refugia is prohibited from specific gears or specific period, but for conservation area any activities are prohibited for whole year.
- Mr. Etoh said that fish refugia will be included in project work plan. He also suggested Fisheries Office to translate fish refugia report from Khmer to English and send to SEAFDEC/TD. The report may use a starting point for further investigation before establishing fish refugia in CFs Prey Nub2. The report should be completed in April, so the project can make a proposal for full investigation.
- Mr. Pich Bunna said that the project should record illegal fishing activities in a note book. Mr. Ing Try suggested Mr. Yos Chanthana to write annual report to FiA. The report should mention only key points.

#### **2.5. Closing the meeting**

- Mr. Ing Try summarized results of the meeting and he expressed his appreciation on the result of the meeting and he strongly hope that based on the discussion today, we will get further good result. Finally, he would like to thank all participants taking their valuable time to participate this meeting, and he praised all participants with success in their duties now and in the future.

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Draft by: Yos Chanthana	10.05.2007
Endorsed by: Sei Etoh	18.06.2007

ANNEX 5

**MINUTES OF  
THE 4TH IMPLEMENTATION AND COORDINATION COMMITTEE  
(ICC) MEETING**

**Integrated Coastal Resources Management in Sihanoukville (ICRM-SV)**

- Venue: Fishery Office, Sihanoukville
  - Date: 23 May 2007
- 

**List to participants**

DOF Cambodia & Fisheries Office Sihanoukville

- |                     |  |
|---------------------|--|
| 1. Mr.Ing Try       | Deputy Director General, DOF, PP         |
| 2. Mr.Ke Dha        | Deputy Director, Agriculture Dept., SV   |
| 3. Mr.Duong Samath  | Chife of Fishery Office, SV              |
| 4. Ros Vuthy        | Vice chief of administration office, DOF |
| 5. Mr.Pich Bunna    | Vice chief CFDO, DOF, PP                 |
| 6. Mr.Sin Satharath | Vice Chief of Fishery Office, SV         |
| 7. Mr. Hoc Laim     | Vice Chief of Fishery Office, SV         |
| 8. Mr.Yos Chanthana | Team leader                              |
| 9. Mr.s Heng Punley | Socio-economist                          |
| 10. Meas Chanda     | Aquaculturist                            |
| 11. Sam RithKeila   | extension worker                         |

CFs

- |                  |                               |
|------------------|-------------------------------|
| 12. Phoun Nam    | Chief of Sangkat Toeuk Tla    |
| 13. Ly Deal      | Village chief of Prek Sangke  |
| 14. Soeur Yob    | Village chief of Prek Toal    |
| 15. San Phat     | Village chief of Kampong Chin |
| 16. Nhim Neng    | Village chief of Prek Pros    |
| 17. Rim Mousoeur | CFs leader                    |
| 18. 18. Tes sos  | CF committee                  |
| 19. Hoc Tean     | Women group representative    |

SEAFDEC/TD

- |                             |                             |
|-----------------------------|-----------------------------|
| 20. Mr.Sei Etoh             | Project leader              |
| 21. Ms.Sumitra Ruangsivakul | Socio-economic Section Head |
| 22. Ms.Jariya Sornkliang    | Assistant Researcher        |

**Opening the ICC meeting**

Mr. Ing Try declared opening 4<sup>th</sup> ICC meeting. He continued that in the today meeting we will work with the following objectives:

- to monitor the project progress since the last ICC meeting
- to discuss the proposed project immediate work plan for the next 3 months from the practical implementation points of view
- to identify the constraints in project implementation at local level and find solutions
- to report the outline of the project work plan in 2007 which was endorsed at the 3<sup>rd</sup> SC meeting



### 3. Contents of meeting

Mr. Ing Try invited Mr. Yos Chanthana to present the 3<sup>rd</sup> ICC meeting's minutes and the project progress since the last ICC meeting. Mr. Yos Chanthana read the 3<sup>rd</sup> ICC meeting minute line by line and the participants made some comments and ask for clarification what progresses have done reflecting to what were committed in the 3<sup>rd</sup> ICC meeting.

Mr. Etoh suggested the Fisheries Office to show the report of feasibility study on conservation area establishment, because until now, he had not yet received this report.

Mr. Meas Chanda replied that following instruction of Director of Fisheries office, he and Mr. Nen Chamroeun conducted consultation with CFs and local authorities on the possibility of fish refugia establishment, but the findings may not be completed due to limitation of experiences and knowledge on fish refugia.

Mr. Nen Chamroeun added that, first step we collection information on fishing gears, and we made consultation with CFs on impact of refugia on their fishing activities. After getting agreement from CFs, we conducted the 2<sup>nd</sup> step by looking at biological characteristics of targeted species and the coverage area of fish refugia. He stressed that biological information was based on experiences from Fishermen not from academic works. Based on the study, Mr. Nen Chamroeun continued, we temporarily chose refugia for sea grass at Khos Krous and blood cockle at Khos Angkor.

Mr. Ing Try asked "who is responsible for this study? He instructed the responsible person to write the report and send him before 20 June, 2007" because this report was important for the meeting in 26 June, 2007 in Bangkok. He also assigned Mr. Yos Chanthana to help Mr. Meas Chanda to prepare the report in Khmer and English. Mr. Doung Sam Ath committed to monitor and speed up the report writing.

Mr. Etoh asked for clarification that, according to Mr. Ing Try suggestion at 3<sup>rd</sup> ICC meeting, Mr. Yos Chanthana promised writing every four month report and send to project leader but so far nothing had been received yet. Mr. Yos Chanthana said that a monthly report was complied carefully in Khmer but he acknowledged that he failed to translate in English. He explained that he worked as an officer in the administration section of fisheries office, there are so many works to do. However, he still tries his best to work in the project.

Mr. Ing Try said that, Mr. Keila prepares monthly report to Mr. Yos Chanthana. Mr. Chanthana will send this report to fisheries office, agriculture department and Fisheries Administration, Based on the report, any problem happened; we should discuss and comment to solve the problem. Mr. Ing Try instructed Mr. Yos Chanthana to write report to Mr. Etoh for every four months.

Regarding to mud crab culture, he assigned Mr. Yos Chanthana and Mr. Sin Satharath to discuss with Mr. Etoh in the afternoon.

He also suggested Mr. Etoh to help in fish refugia establishment in CFs Prey Nub2. Mr. Etoh asked the Fisheries Office to make in detail about the estimated budget, design, and plan.

Regarding the purpose of coordination committee to supervise the fisheries management planning and implementation in the CFC, Mr. Pich Bunna suggested Mr. Yos Chanthana to correct his comment in the 3<sup>rd</sup> minute "we should not form this committee because it may work overlap with Community Fishery Committee (CFC)". He stressed in accordance to the Sub-decree that the

Fisheries Coordination Committee should be formed to guide and supervise implementation of the fisheries management plan by the CFC and this sort of committee should be formed sooner or later.

Mr. Etoh stated that the Coordination Committee would act as the body to coordinate, monitor and suggest the CBRM function for the CFC and the members should be consisted of the representatives of FiA, Sihanoukville Fisheries Office, Local administrative authorities, learned scientists in the field and SEAFDEC/TD. Therefore, it is the supervisory committee on implementation of CBRM so to say.

Mr. Ing Try suggested that pending the formation of such a committee the ICC Meeting would act as the body of Coordination Committee. The ICC Meeting agreed on his suggestion.

Mr. Ing Try asked Fisheries office and CFs about possibility of mangrove plantation. Mr. Etoh gave the precedents based on his experiences in many countries, particularly failure cases that after planting with a period of time mangrove trees fell in the water and died. Mr. Ing Try assured that Fisheries Administration had a capability for planting mangrove. He asked CFs and Fisheries office to set a schedule and find suitable places for planting mangrove.

Mr. Etoh said that this activity should be conducted within volunteer work and participants should come from school children, fishermen, local authorities and local communities. Mr. Ing try mentioned that Fisheries office is ready to offer for snacks and water for this occasion and SEAFDEC will provide 500 pens, 150 T-shirts and 500 notebooks. CFs and Sangkat are responsible for seed collection. Mr. Phoun Nam promised to mobilize CFs in collecting mangrove seeds. Mr. Ing Try suggested Mr. Phoun Nam to invite fishermen and school children to participate in mangroves planting.

Mr. Etoh stated that the performance of the women group in Kampong Chin was very successful in mushroom production (the economic return against capital investment is 161%). In Prek Sangke, women still got profit, marginal through. For Prek Toal, high products, but low economic return due to high production cost and less production quantity. For Prek Pros 1, the activity was replaced by the new group called Prek Pros II which was going on well but still in small amount of production.

#### **Closing the meeting**

At the end of the meeting, Mr. Ing Try thanked to all participants for their time and efforts to participate in ICC meeting. After that he declared closing the meeting.

Draft by Yos Chanthana  
Endorsed by: Sei. Etoh

Date: 10.06.2006  
Date: 18.06.2006

**Annex 6**

**Photos on activity**



The 4<sup>th</sup> ICC meeting



Patrol of Local Enforcement Unit



Film shooting on project activities



Mushroom production



Workshop on women's group activity



Mud crab culturing