Daem Thkov Community Fishery

Socio-Demographic Survey

Fisheries Administration
Fisheries Conservation Department

June 2011

Photo 1– Koh Rong Samloem CFi trainee conducting questionnaire in Daem Thkov

Report by:

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In collaboration with:

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List of Abbreviations

CFi	Community Fishery
CFA	Community Fishing Area
FiA	Fisheries Administration
FCD	Fisheries Conservation Department
HP	Horse-Power
ICM	Integrated Coastal Management
KRS	Koh Rong Samloem
MAFF	Ministry of Agriculture, Forestry and Fisheries
MCC	Marine Conservation Cambodia
MFMA	Marine Fisheries Management Area

Introduction

Cambodia has rich marine resources and habitats such as coral reefs, sea grass beds, mangroves, wetlands, salt marshes, sensitive benthic habitats and sandy beaches. These marine resources and habitats have and are being seriously damaged by human activities including excessive fisheries exploitation, illegal and destructive fishing, habitat conversion, pollution and terrestrial run-off. High population growth and increasing demand for marine fisheries products for both the local and international markets have caused a drastic decrease in fisheries resources, thus threatening the livelihoods of coastal communities that rely on these resources.

In order to manage fisheries resources more sustainably, the Fisheries Administration (FiA) has tried several approaches including centralized and decentralized approaches. Community-Based Natural Resources Management is one of the decentralized fisheries management approaches that have been promoted in the Cambodian fisheries sector for several years. The Royal Decree on the Establishment of Fisheries Communities was officially adopted and launched in June 2005 (FiA, 2005). The Decree encourages local small-scale fishers to form community organizations for the purpose of protecting and using fisheries resources in sustainable way within locally defined areas. Furthermore, the creation of a Conservation Department in 2009 has gone a long way to increasing the efforts to protect and conserve Cambodia's marine resources.

The FiA-registered Community Fisheries around the islands of Koh Rong and Koh Rong Samloem have been working towards conservation over the past few years, with the support of the FiA, relevant local authorities (local fisheries committees, Sangkat and local police) and other partner organizations. The introduction of the Community Fishing Area (CFA) around the islands of Koh Rong Samloem and Koh Koun, reaching the southern shore of Koh Rong, has had a great influence on the protection of reefs and surrounding habitats with community patrols cracking down on illegal and destructive fishing techniques such as dynamite, cyanide fishing and coral harvesting. The monitoring is beginning to show the effectiveness of community protection, although major issues such as illegal inshore trawling and united law enforcement still constitute a significant threat to the conservation and sustainable use of marine resources.

In order to conserve marine resources on a long-term scale, biodiversity approach and socio-economic approach need to be fully integrated within the creation and management of the MFMA (Marine Fisheries Management Area) and its associated Zoning Plan. It is essential that relevant government departments collect all necessary information on the communities that will be directly affected by the creation of the MFMA and Zoning Plan, that is to say the communities residing on Koh Rong and Koh Rong Samloem. Koh Rong Samloem Community Fishery, Prek Svay and Koh Toch (Koh Rong) have already been surveyed. Daem Thkov Community Fishery on Koh Rong was the last community to be studied: it is the subject of this present report.

I.   Site description

"The island of Koh Rong (*Figure 1*) is located offshore about 34 Km from and northwest of the mainland of Sihanoukville port. It lies between the coordinates of UTM 1178 to 1192 N, and 3028 to 3165", locatedbetween the islands of Koh Rong Samloem (toward the south) and Koh Ta Team and Koh Mneas (to the north). Koh Rong is the second largest island in Cambodia after the island of Koh Kong (Koh Kong province),covering 78 km² of "undulating topography with its highest peak at 133 meters (m), 28 beaches ranging from 30m to 6km in length and seven with shallow waters"[1]. "Koh Rong has three subordinated small islets locally known as Koh Oun, Koh Bang and Koh Daung."[2]
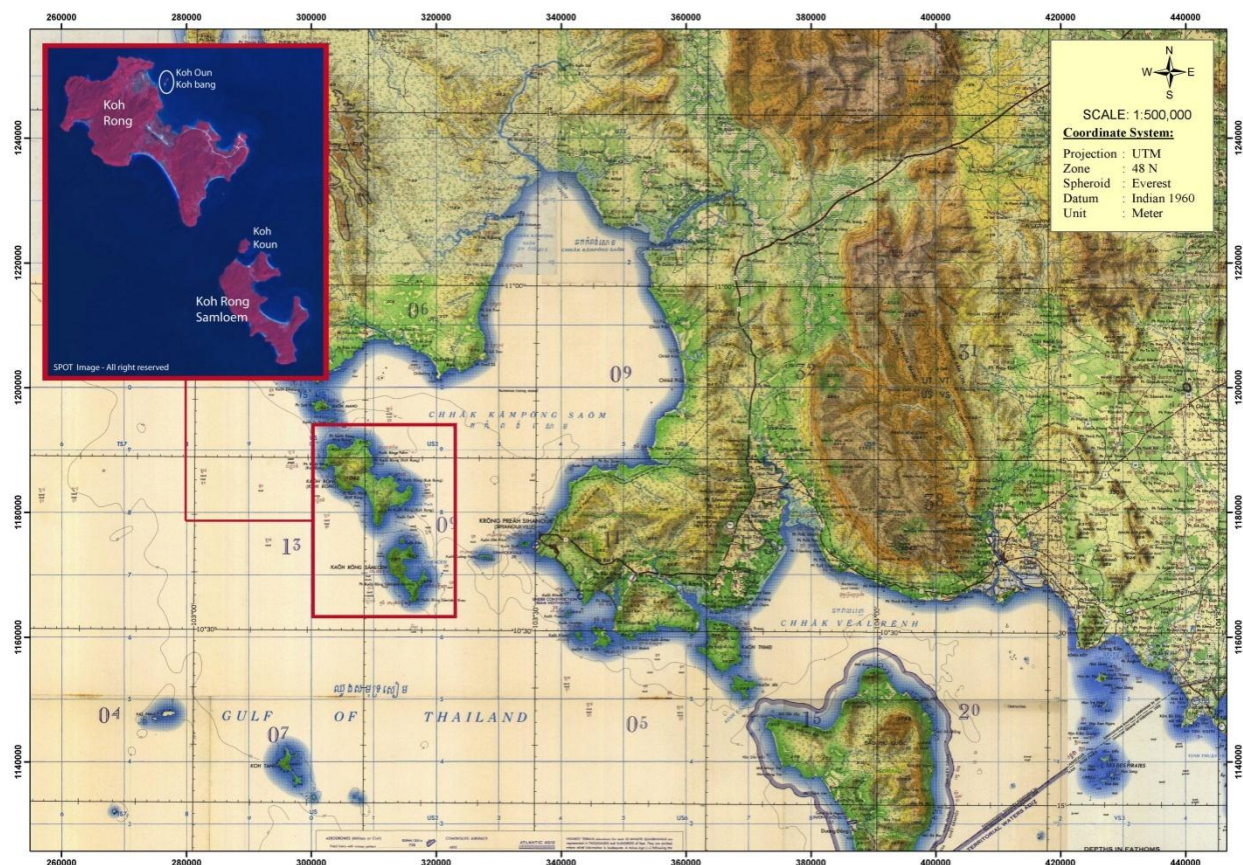
Figure 1 - Coastal Cambodia: close-up on Koh Rong and Koh Rong Samloem

Koh Rong hosts four villages: Daem Thkov, Koh Toch, Prek Svay and Sok San, but only the former three were legally registered with the Ministry of Interior. Daem Thkov is located east of the island, Koh Toch on the south, and Prek Svay on the northeast end (*Figure 2*).

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[1] Koh Rong Island – Millennium Group - www.millenniumgroup.net
[2]SeakSophat, Hoy SereivathanakReasey. *Socio-economic Monitoring of Coral Reef in Koh Rong Island, Preah Sihanouk Province, Cambodia*. FACT April 2010

Figure 2 - Location of the four villages currently established on Koh Rong

The village of Daem Thkov was reportedly established before Pol Pot era and registered as Community Fishery in May 2010 with the assistance of Fisheries Cantonment and Fisheries Administration. The Community is legally named "Community Fishery Phum Daem Thkov " and registered with the Ministry of Agriculture, Forestry and Fisheries (MAFF). According the Head of Community, Daem Thkov hosts 89 households with a total population of 397 persons, of which 209 are females.

The community benefits from a good support from relevant government departments and local authorities doing their best to cope with recurrent issues such as lack of human resources. Shortage of material and equipment still challenges the possibilities of cracking down on large scale fishing such as inshore bottom trawling and foreign poaching around the island despite recent improvement made within Koh Rong Samloem CFA. Being the first victims of the consequences of illegal and destructive fishing on the fisheries stocks, it would be fair to think that community members would be receptive to sustainable fishing concepts. Thus, further training and capacity building on community-based fisheries resource management and livelihood diversification through ecotourism would surely allow the community to move forward.

II.　Goals and objectives of the assessment

The main objective of this assessment is to collect baseline data on the social and economic situation of Daem Thkov Community Fishery, Koh Rong Island. Data collection will focus on household structures and activities, but also on fisheries resource related activities, including catches and types of fishing gears, in order to get a clear picture of marine resource use and conservation around the island of Koh Rong.

The results from this assessment will be used to improve local community-based fisheries resource management and seek support from relevant government departments. Furthermore, the research finding will be essential to the future creation of the first Cambodian MFMA and associated Zoning Plan surrounding the island of Koh Rong and Koh Rong Samloem.

Socio-economic monitoring of coral reef and fisheries resources are essential initial steps in the MFMA creation process and success. By conducting surveys in Koh Rong and Koh Rong Samloem, the social and economic data collected will allow:

- Integrating requirements of marine ecosystems with the need of the people who depend upon fisheries resources. If these social and economic criteria are not taken into account, the MFMA and its Zoning Plan will be created from a single sector management view and will eventually lead to a significant number of resource use conflicts.

- Collecting all necessary data, including information on fishing gears, techniques and target species, in order to establish a clear and well-defined Zoning Plan that is to say a spatial (or temporal) allocation of specific uses and activities to well-defined areas within the larger MFMA. A multiple-use zoning scheme will allow reducing competition and conflicts between human uses of the area while still allowing for conservation.

- Getting a clear picture of people's needs, expectations and perceived issues related to fisheries resource management in their area. This will allow exploring possibilities of alternative sources of income that would contribute decreasing anthropogenic pressure on fisheries resources, especially through marine ecotourism.

III.   Indicators Selected

The questionnaire is divided into three different parts focusing on household structure, occupations and fishing habits. All the indicators listed apply to the social, political and environmental context of the studied community. *Table 1* below summarizes the selected indicators used in the questionnaire. The complete questionnaire can be reviewed in the appendix.

Category	Indicators
Demographics	• *Study area* • *Age and Gender* • *Household size* • *Language* • *Ethnicity* • *Religion* • *Education* • *Occupation* • *Migration / Year of Arrival*
Fishing Practices	• *Type, number of boats and engines* • *Fishing gears and main targeted species* • *Average time spent at sea* • *Evolution in the quantities caught*
Perceived issues and threats	• *Perceived main threats to fisheries resources and related activities*
Livelihood/Lifestyle	• *Type of building / material used*

Table 1 - Summary of selected indicators

IV.   Methodology

The survey was conducted 22-23rd, May 2011, over a 2-day field trip to Koh Rong. A team of 2 people from the Fisheries Conservation Department (FiA – FCD), assisted by two trainee from Koh Rong Samloem Community Fishery (CFi), were assigned to conduct the survey. The tool for data gathering included meetings with key informants (Head of the Community), household surveys and on-site observations. The methodology was quite simple: going from house to house with a short but precise questionnaire, as a more extensive questionnaire would have needed more days and a bigger team.

a. Key Informant

Meeting with Heads of Community allowed gaining general knowledge of the Community, such as the total number of households, types of activities and main issues related to natural resource management, especially fisheries resource management.

b. Household survey

Household surveys were conducted during two days in the community. The two-part questionnaire (*Appendix 1*) focused on:

- Household structure, demographics and activities with additional questions regarding to historical background (date and reason of arrival to the island and/or change of activity).
- Fishing practices including type of fishing gears, main target species, perceived threats, and evolution in the quantities caught.

Several returns to the households were needed as most people were constantly away fishing and/or busy and/or socializing in the evening, which made the questionnaire impossible to conduct during those times. As such, no special sampling method could be used: the sample was randomly selected by going from house to house. In the end, 27 out of a total of 89 households were interviewed (30,34 %).

Two students from Koh Rong Samloem CFi were trained to conduct household surveys and already had experience conducting questionnaires in Koh Rong Samloem Village and Koh Toch. During break times, completed questionnaires were thoroughly checked for consistency of data entered during individual household interview. This also allowed team members to share experience of methods used to ask questions and possible difficulties that were encountered.

c. Observation

On-site observations complemented the surveys by recording "hidden data" or information that might not be divulged or expressed freely by participants during the interviews. In addition, observations can be used to get some details on local fishing habits and gears, as well as illegal and destructive fishing occurring in the area.

V.   Results

a. Community Demographics

According to the Head of Community, the total number of inhabitants in Daem Thkov CFi is 397, including 209 females. However, we recorded 145 inhabitants in 27 households, with an average size of 4,5 persons per household.

Gender composition within Daem Thkov Community

47%

53%
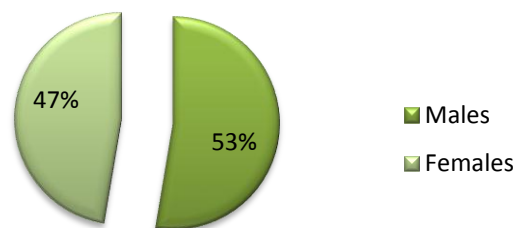
■ Males
■ Females

Figure 3 - Gender composition

Among the 145 persons recorded 65 (45%) were females, which statistically matches the data given by the Head of Community give or take 2%(*Figure 3*).

By calculating the percentage of population based on the distinct age groups (*Figure 4*), it was estimated that:

- 45 percent of the population was under 18 years old;
- 28 percent between 18 and 30 years old;
- 21 percent between 31 and 50;
- 6 percent over 50 years old;

- the mean age was 23 years old;

- the oldest person recorded was 65 (male).

The percentage of people ranging between 19 and 30 being relatively high, the Community has a strong, young labor force among its working population. However, the very high percentage of under 18 year old means a necessity to provide education and capacity building to the young generations.

Age composition among community members

6%

21%

45%

28%

- < 18 years
- 18-30 years
- 31-50 years
- > 50 years
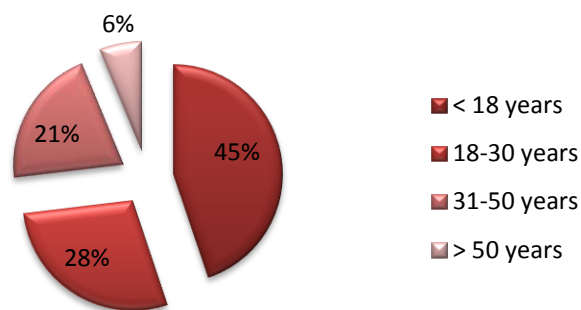
Figure 4 - Age composition among Daem Thkov Community members

Furthermore, the results show that:

- 100% of the persons interviewed were Khmer

- 100% listed their first language as Khmer

- 100% were Buddhist

However, the presence of other ethnicities such as Cham (Muslim) or Vietnamese and other religions (e.g.: islam), although most likely representing a very low percentage of the population, shall not be excluded.

Education

Out of the three primary schools that can be found on the island[3], one is located in Daem Thkov. However, a recent survey in Koh Toch Community stressed on the irregularity of the teachers' coming

[3]SeakSophat, Hoy SereivathanakReasey. *Socio-economic Monitoring of Coral Reef in Koh Rong Island, Preah Sihanouk Province, Cambodia*. FACT April 2010

and the difficulty to find teacher from Kampong Som willing to move to the island. Regarding literacy, the results show that in Daem Thkov:

- 76,5 percent of the persons interviewed had received education
- 23,5 percent reported that they had no schooling at all. Among them, 11 percent (16 persons) were under 7 years old.
- The average length spent in school was 4,3 years .
- 100 percent of the 7 – 17 year old go to school, with an average study length of 3,8 years.
- 2 persons (51 and 27 years old) reported that they went to Buddhist school.

Immigration

The persons interviewed arrived to the island between 1989 and 2006 for the latest (*Figure 5*) with a peak in 1993 and a majority of them coming from Kampot or Preah Sihanouk Province (37 and 44% respectively - *Figure 6*).

Percentage of arrivals per year between 1989 and 2006
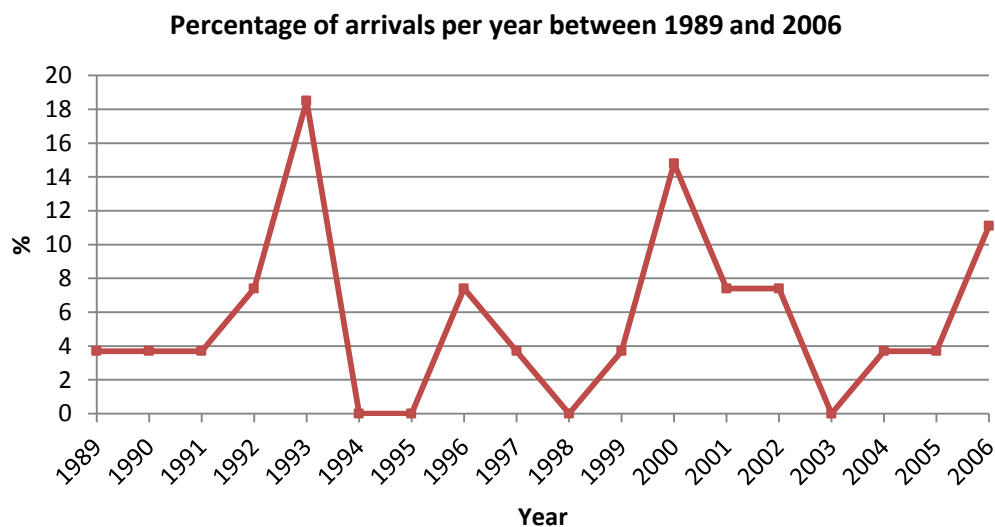
Figure 5 – Percentage of arrivals to Daem Thkov Community per year, from 1989 (first reported arrival) to 2006 (latest reported arrival)

Origins of the villagers (homeland)*
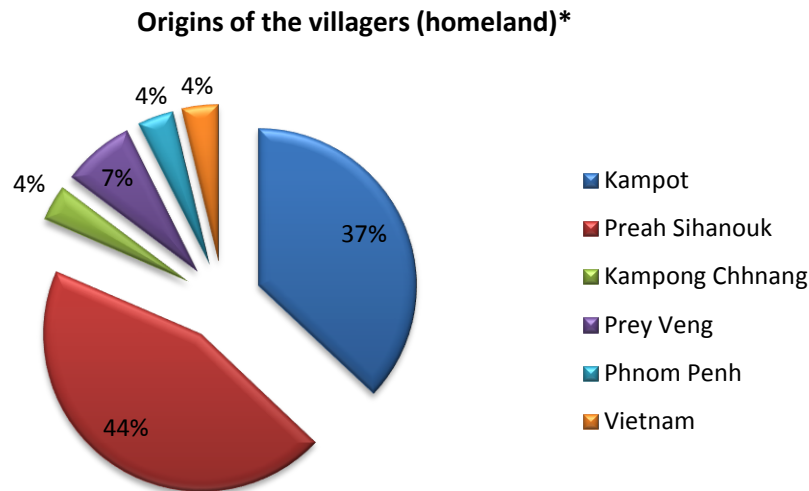
Figure 6 – Villagers' homeland.
question asked to the person who was interviewed; family members were not taken into account.

The reasons why they moved to and settled in this new place were mainly related to livelihood improvement opportunity (*Figure 7*), which if added up would totalize 73 percent of the reasons mentioned. 24 percent said they had followed siblings or parents; one person mentioned having "followed her husband back to his homeland": this would thus mean that the village was established before 1989, most likely before the Pol Pot era when the inhabitants were then forced to evacuate to the mainland and the island turned into a military base. Studies[4] show that people started returning to the island after 1990, which would match with the peak of arrivals of 1993. The same study shows that the general immigration scenario for Koh Rong followed the fluctuation in the availability of natural resources. Indeed, the immigration flow slowed down and even reversed (cases of emigration), when fisheries stocks and catches dropped down along with the arrivals of trawlers operating in the area. Another reason was the island development lease which made forest resources no longer available. However, along with tourism development and related business opportunities, a new increase in immigration could be expected in the near future.

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[4]SeakSophat, Hoy SereivathanakReasey. *Socio-economic Monitoring of Coral Reef in Koh Rong Island, Preah Sihanouk Province, Cambodia*. FACT April 2010

Reasons for moving to Koh Rong / Daem Thkov Community

- Followed siblings/parents
- Decrease in fish catch, looking for better fishing grounds
- Soldier
- For business / Easier to start a business here / Too much difficulties on the mainland
- To change occupation (and start fishing) / No rice fields at home
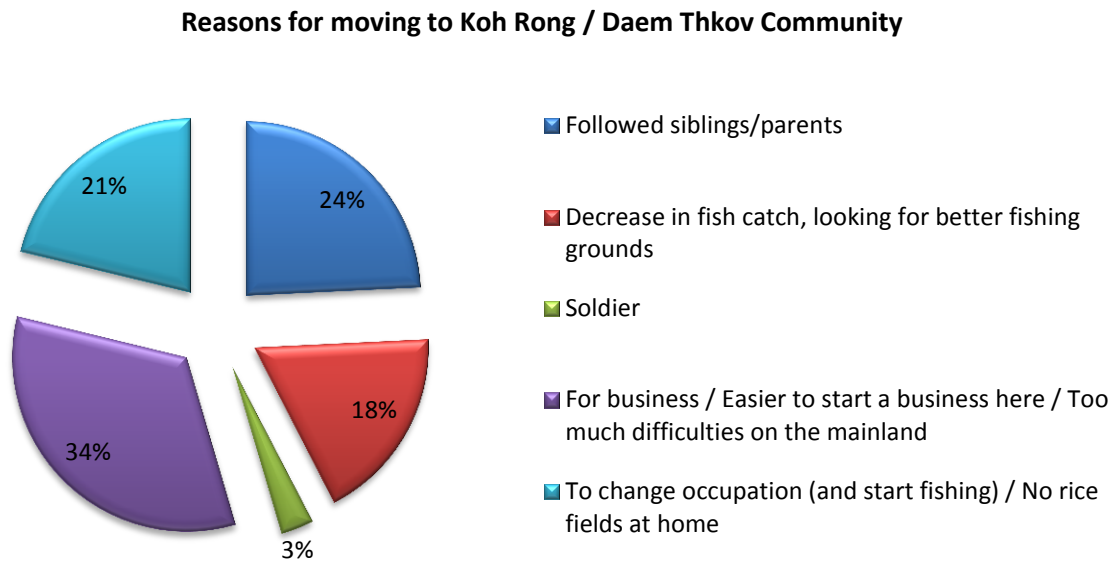
Figure 7 - Reasons that pushed the people to move to the island and settled in Daem Thkov

b. Occupations and income sources

Daem Thkov CFi heavily depends on fishing as it constitutes its dominant activity (67% - *Figure 8*).74% of the people involved in fishing listed it as their primary activity. Small businesses add up to 14 percent of people's occupations while agriculture comes third (10%). Also, it is not rare that people combine two different activities such as fishing and farming so they can switch from one to another according to the weather conditions. Fishing-related work such as boat carpenter (observed on-site) or house builder should most likely be found among community members but were not recorded within the sample.

Occupations/Activities within Daem Thkov CFi

Legend:
- ■ Fishing
- ■ Seller (goods, homemade food, etc.)
- ■ Cooking
- ■ Agriculture
- ■ Charcoal worker
- ■ Crab Meat Maker
- ■ Factory Worker
- ■ Middle woman (fish trade)

2% 2% 2%
3%
10%
6%
8%
67%

Figure 8– Occupations and activities within Daem Thkov Community Fishery

c. Infrastructures and Types of housing

Photo 2 - Type of housing observed in Daem Thkov CFi: low end families

Wood is the most common material being used for construction of structural walls, flooring, and village facilities (piers). Yet, spare pieces of tin, thatch and tree bark were also found to be used by the lower-end households (*Photo 2*). Tin roof are the most popular for roofing while some houses use grass. A few, bigger houses were built with brick and concrete.
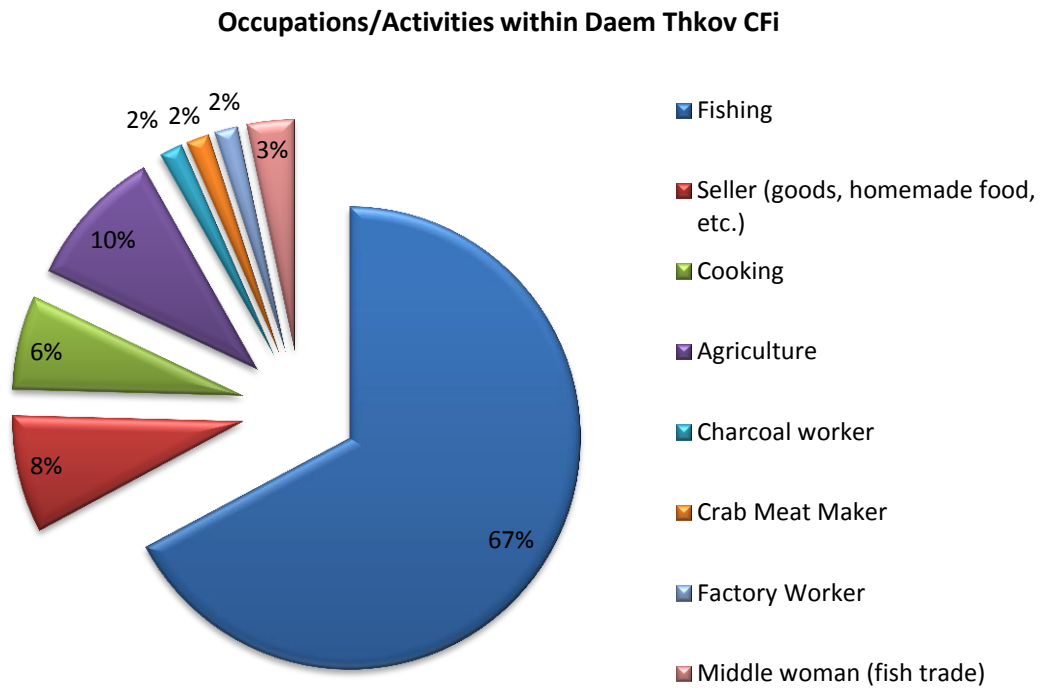
Because the island has so far not been developed, there is no heavy infrastructure. After the island was leased to private development companies, touristic infrastructures, including road network, have been started and will be completed over the next years, thus benefiting local communities. As for now, boat is the main means of transportation although a few motorbikes are now using the dirt road starting at Daem Thkov. A primary school, a referral clinic, a commune (Sangkat) office and communal police office are found around the community and a telecommunication antenna can be seen from the distance, allowing access to the Internet.

d. Coastal/marine natural resources

Koh Rong is partly surrounded by the tropical reefs, mainly fringing reefs, providing a unique marine environment which allows the presence of a great biodiversity. Benthic habitats such the seahorse breeding grounds are also to be found, constituting an extremely fundamental part of the marine ecosystem where a range of macro life can be observed. The area also encompasses seagrass and mangrove ecosystems therefore contains representative habitats of whole shore to intertidal environments and from coral reefs to deep water environments*(Habitat distribution map: Appendix 2)*.

High-value fish species,squid species and the blue swimmer crab are the main commercial species targeted by Daem Thkov fishermen. An increase in Grouper (*Epinephelus sp.*) and other commercial fish species has been witnessed since the implementation of Koh Rong Samloem Community Fishing Area, by fishers using fish traps.

e. Coastal/marine resource utilization

i. Costal and marine activities/good and services

Fishing: types of boats

All 27 Households are involved in fishing practices using boats (*Figure 9*). Some households were found to have several boats: one had two long-tails while another had four, each of them using different fishing gears;one had a long-tail boat as well as a ko yon.

Types of fishing boats
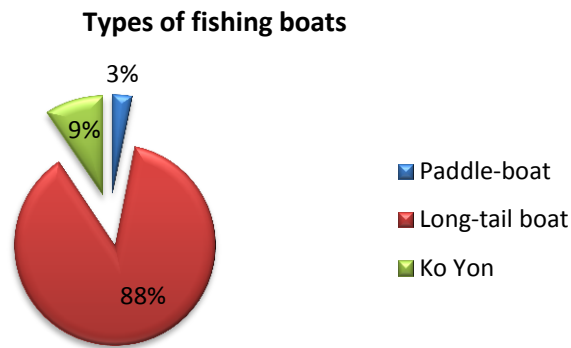
Figure 9– Types of fishing boats found in Daem Thkov

All long-tails and ko yon had only one engine; long-tail boat had a mean power of 10,7 HP while ko yon had a mean power of 22,7 HP.

Fishing gears

Collapsible crab traps (*Photo 3*) were found to be the dominant fishing gear used in the community, followed by squid traps and fish traps (*Table 2*). Nets do not seem to be widely used, with the highly destructive bottom crab net having the lowest use rate. Since it is the most sustainable type of commercial fishing available in the area, the use of traps should be both encouraged and regulated. Details on fishing gears (number of hooks, of traps, and length of nets) are listed further in the document (Table 3).

Photo 3 - Old unused crab traps, Daem Thkov

Use of fishing gear per type of boat
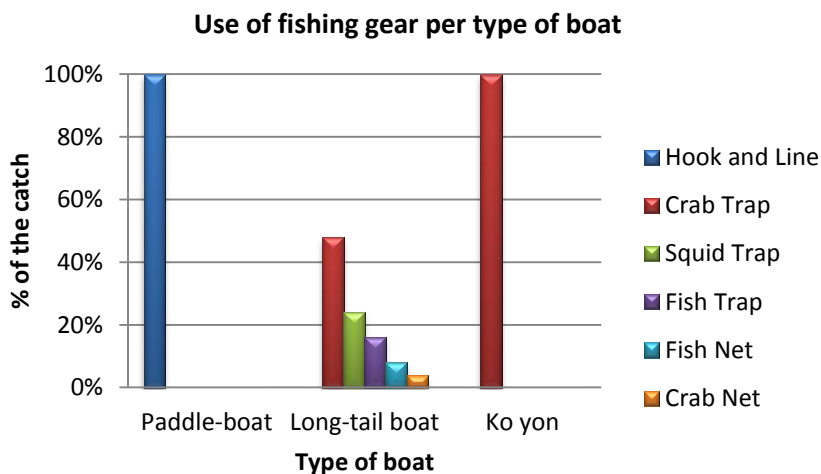
Figure 10 - Use of fishing gear per type of boat

Most fishermen target one main species although the species in question can change according to the season. Thus, it is frequent to see fishermen using a combination of gears, which makes sense when observing the catch composition per boat (*Figure 10*).

	Long-Tail	Ko Yon	Paddle-Boat
Hook and Line (unit)	-	-	30
Crab Trap (unit)	1046	1933	-
Squid Trap (unit)	320*	-	-
Fish Trap (unit)	91,25	-	-
Crab Net (meter)	50 m	-	-
Fish Net (meter)	180 m	-	-

Table 2 - Mean number of hooks or traps / Length of net per type of boat.

The median of the number of squid traps per long-tail is 65. Here, the average (320) is high because of one household having 1600 squid traps while the others range between 50 and 80 traps.

Targeted species

The three main targeted species in Daem Thkov (*Figure 11*) are blue swimmer crab (44%), followed by fish (28%) and squid (25%).

Main targeted species
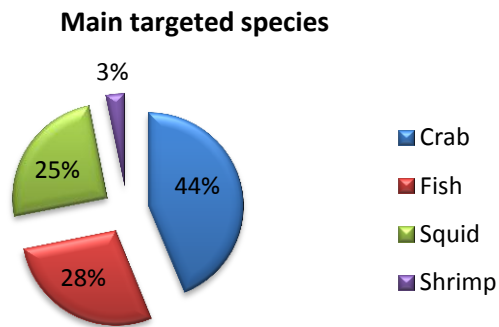
Figure 11– Main targeted species in Daem Thkov CFi

However, since it has been observed that fishermen often use a combination of gears, the results show that some household target a combination of main species. For instance, four people predominantly using crab traps recorded that they were also catching fish and/or squid and/or shrimp. Finally, one fishermen using squid trap as his main gear also recorded catching crab (*Figure 12*). Thus, the catch composition was also recorded in function of the dominant fishing gear (*Figure 13)*.

Main targeted species per household
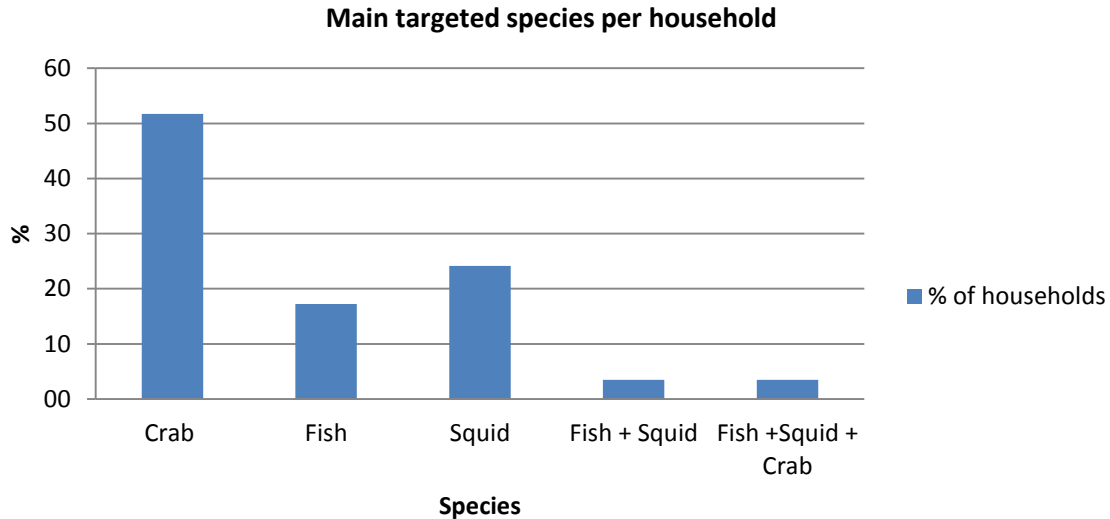
Figure 12 –Main targeted species per household

Catch composition per dominant fishing type
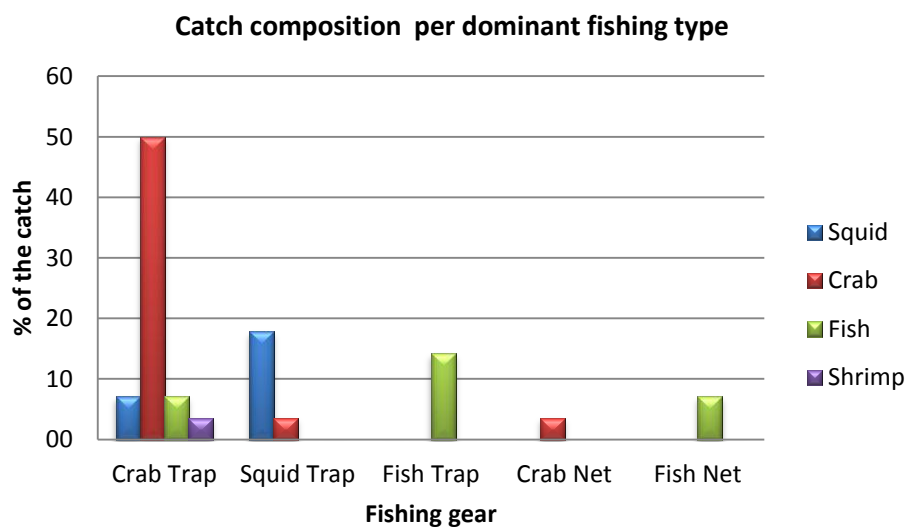
Figure 13 - Catch composition for long-tail and ko yon boat, per dominant type of gear

Finally, the average time spent at sea (*Table 3*) shows that the activity constitutes an important part of people's daily life and livelihoods.

	Average time per week (day)	Average time per fishing trip (hour)*
Paddle-boat	4	4
Long-tail boat	5	7,2
Ko Yon boat	5,5	9,5

* Includes return trip to pick up the traps/nets

Table 3 – Average time spent at sea

ii.   Market Orientation and Household Consumption

Fisheries products are mainly sold to a middle man/woman within the community (around 50%) or at the provincial level, mainly Kampong Som (>40%). The products do not seem to go much further than the province as the national scale is only slightly represented. Finally, a small part of the catch is kept for family consumption (*Figure 14*).

Market orientation for fisheries products*

*Local: Daem Thkov. *Provincial:* Preah Sihanouk Province/Kampong Som. *National:* all provinces/Phnom Penh. *Household:* for own consumption.

Figure 14 - Market orientation for fisheries products

All goods from other occupations (small shops, bars, etc.) are sold at the community scale.

f. Impact, threat and problem of coastal/marine resource use

i. *Perceptions of Resource Conditions*

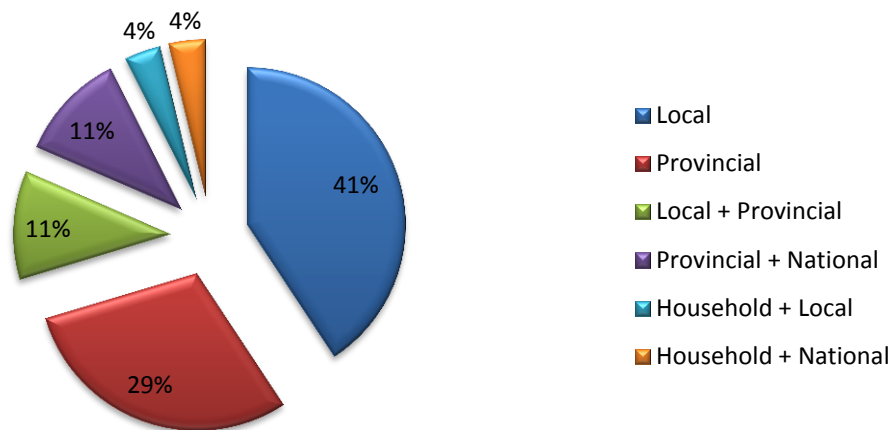The great majority (92,6%) of the persons interviewed recorded the catch as being lower than before (*Figure 15*), 13 of them giving out percentage of decrease of their own catch (*Figure 16*). Five persons estimated a decrease of more than 80%.

There was a lot of big fishing boat from outside the area operated around the island by using the bottom trawling which destroying the marine recourses and habitat as well as destroying local people fishing gears, and there was some foreigners (unknown people) diving under the water then cut local people fishing gears such as; crab trap, squid trap, etc. which made local fishermen facing lower catch than before, reported by persons interviewed during the survey.

Perceived evolution of the catch quantities
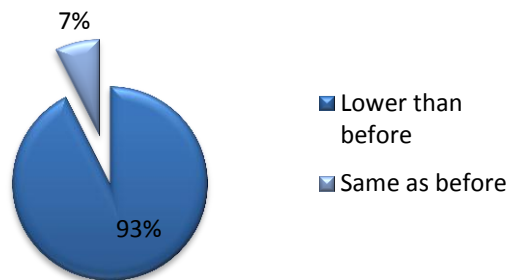
Figure 15 - Perceived evolution of the quantities caught

Perceived percentage of catch decrease
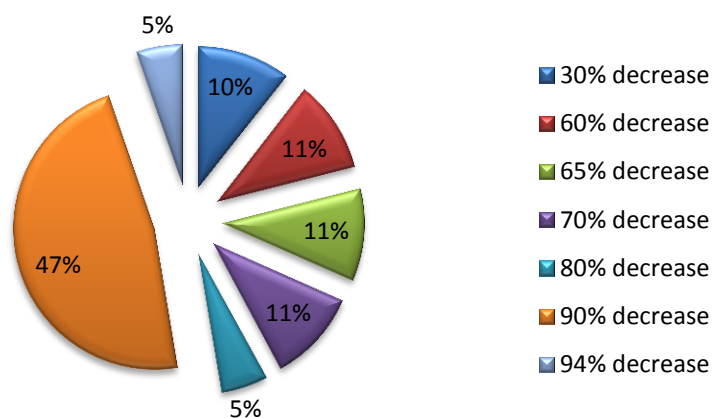
Figure 16 - Perceived percentage of catch decrease

The reasons for this decrease were asked in the form of open answers while another question involved selecting predefined answers. The results will be reviewed below.

i. *Threats to fisheries resource management and resource use conflict*

Among the 10 answers to be chosen in the questionnaire, only four were selection by the persons interviewed (*Figure 17*). Trawling comes first as being the main issue threatening fisheries resources and local people's livelihood. Overfishing comes second (11%) while illegal fishing namely motorized push netting and flying come third (17%) and last (8%).

Perceived threats / Illegal fishing

- Trawling
- Motorized push netting
- Over fishing
- Flying Net

8%
17%
11%
64%
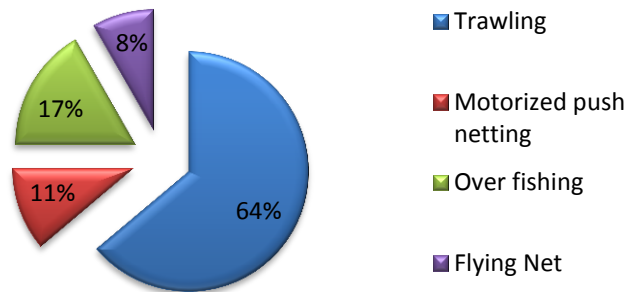
Figure 17 –Perceived threats to fisheries stocks and fisheries resource management

Dynamite fishing, electro fishing and seining were not recorded, although other studies[5] mentioned the presence of these types of fishing in the area as dynamite fishing is still occasionally heard by local divers. Pollution, waste dumping and sedimentation were also not recorded; however, this might be related to a lack of knowledge on how these issues affect the fisheries resources. Indeed, these issues have been recorded as "high" in marine surveys undertaken around the islands. Solid waste management is a common issue to all island communities. Finally, Koh Rong still being largely undeveloped, the issue of coastal construction was not cited.

Photo 4 - Trawlers cleaning up their nets in from of Daem Thkov CFi, early morning

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[5]B. Krell, M. Skopal, P. Ferber. Koh Rong Samloem and Koh Kon Marine Environmental Assessment, Preah Sihanouk Province – Report on Marine Resources and Habitats. MCC 2011

Relating to the decrease observed in the quantities caught, open answers were written down. The records show that:

- once again, trawling boat were largely blamed as "big size fishing boats with modern fishing gears", "trawling boats" or "Vietnamese trawlers".
- Sand dredgers operating in the area were frequently cited and blamed for "making the water dirty" and "causing the squid to decrease".
- Illegal fishing was mentioned in the form of "light fishing", "flying nets" and "poison fishing by Vietnamese".
- "Climate change" and "unusual winds" were also quoted twice.
- Conflicts with "unknown people", "divers" and "foreigners" destroying/cutting traps were cited three times; similar issues have also been recorded in Koh Rong Samloem CFi and Koh Toch (MCC 2011).
- Demographic growth, along with an increase in market demand, was cited as a cause of depleted fisheries stocks.

Conclusion

Daem Thkov is a perfect illustration of the challenges and issues faced by small coastal communities. Yet, along with the Cambodian islands being developed for tourism, it also illustrates the great potential of livelihood improvement through marine and cultural ecotourism.

Threats to fisheries resources and marine habitats such as inshore trawling, sand dredging and foreign poaching affect both marine ecosystems and community members whom livelihood depend upon the health of fisheries stocks. Realizing the damage caused by illegal and destructive fishing, community members would most likely willingly take part in the creation of a Marine Fisheries Management Area that would protect them from large-scale fishing and offer them alternative source of revenue through ecotourism. Discussions with groups of inhabitants show that people were willing to open to sustainable tourism, focusing on cultural and marine assets that they community could offer, yet expressed concerns about tourism impacts on culture and traditions, especially on younger generations, quoting the case of Koh Toch community: "we want ecotourism the same way as Koh Rong Samloem because now Koh Toch has too many problems".

Along with proper training in capacity building, sustainable development concepts and incentives to widespread the use of traditional non-destructive fishing gears such as traps and squid lines, Daem Thkov CFi could be a major asset in a future MFMA co-management process.

APPENDIX

1. Detailed questionnaire conducted in Daem Thkov

PART 1 - SOCIO-ECONOMIC DEMOGRAPHICS

H1.   Family Name: _____

H2.   When did you arrive in the village?   _____

H2.1 From where? _____

H2.2 Why ? _____

H3.   How many family members do you have?   _____

Member	Age	Gender	Ethnicity	Religion	Language	Education*	Occupation

read (r) and / or write (w) + years of school education

H4. Household income sources:

Occupation	Primary	Secondary	Tertiary	Goods and Services	Market Orientation*

for household consumption, local, national or international market

H5. Were you a fisherman in the past?   Yes ☐   No ☐

    H5.1 If yes, when and why did you stop?

_____

_____

_____

PART 2 - FISHING PRACTICES

F1. What kind of boat do you have and how many ?

Long-Tail Boat [ ]   Paddle-Boat [ ]   Other   _____

    F1.2 If you have a long-tail boat: size (in *horsepower*) and number of engines? _____

F2. What types of fishing gear do you use, how many do you have and for which targeted species?

Fishing gear	Number	Targeted species*

    fish, squid, crabs or others

F3. What is your main targeted species?

Fish [ ]   Squid [ ]   Other   _____

F4. How many days per week do you go fishing? _____

F5. How much time (average) do you spend on what kind of boat on one normal fishing day?

Time (*hours*)	Type of boat	Type of gear	Targeted species

F6. Have you noticed a difference in the quantities of your catches, between now and when you first arrived in the area? Average quantities of catch are now:

higher [ ]   equal [ ]   lower [ ]

F7. What kind of illegal fishing still occurred?

Code	Description	☑
1	Trawling អួនអូស	☐
2	Motorized push netting	☐
3	Dynamite fishing	☐
4	Electro fishing	☐
5	Seining អួនហ៊ុំ	☐
6	Pollution, waste dumping	☐
7	Sedimentation	☐
8	Over fishing	☐
9	Coastal construction	☐
10	Other	☐

F8.1 If you think the catch quantities are now lower than in the past, what do you think are the potential reasons for this decrease in catch rates?

_____

_____

_____

2. Main Marine Habitat Distribution map – Koh Rong

Main Marine Habitat Distribution around Koh Rong Island

Koh Rong

Coral Reef

Rock and Coral Reef

Deep Coral Reef

Seahorse Area / Breeding Ground

Seagrass

Mangrove

Created in MapInfo 8.5
MCC 2011

0 ———————— 4,6 km