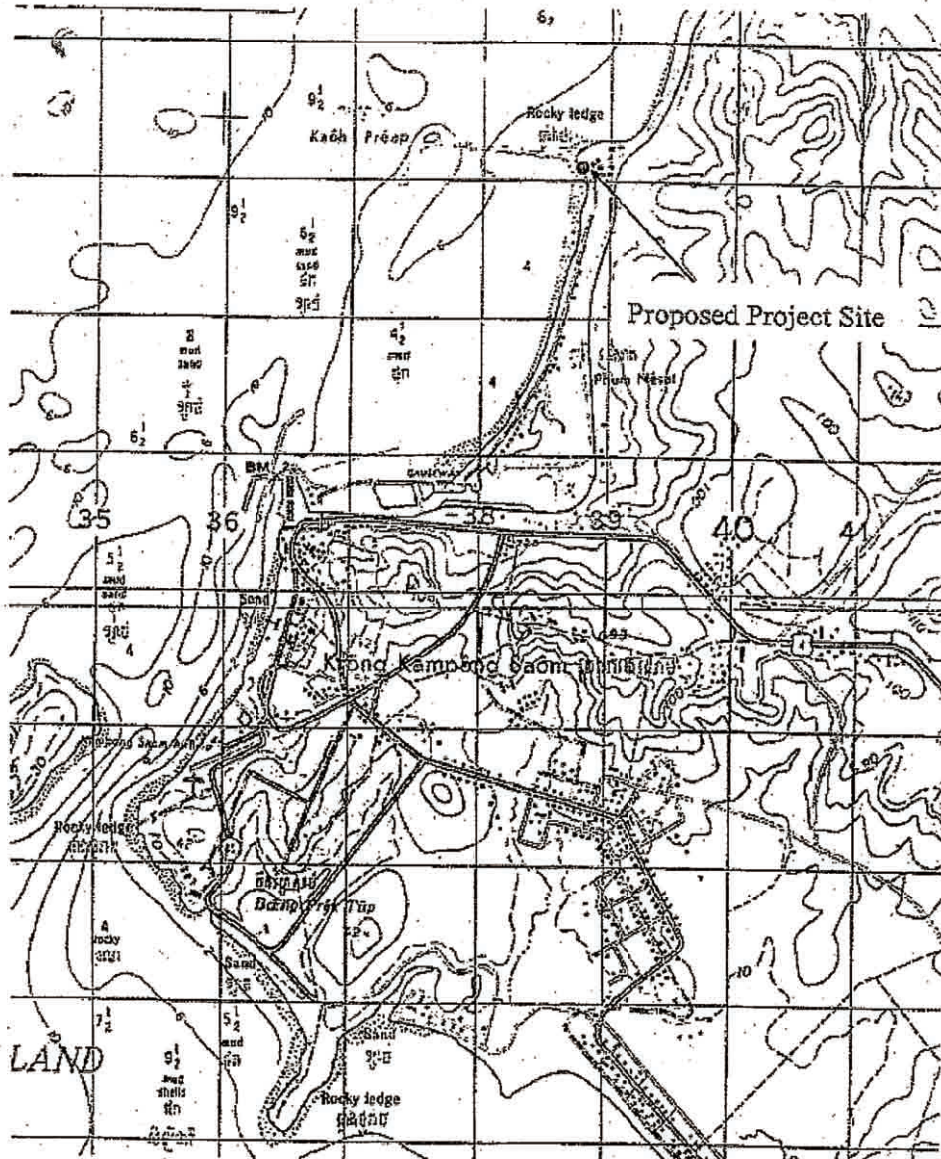


Location Map of the Project Site



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[Items requested by the Royal Government of Cambodia]

Administration Building

Brood Stock & Culture Facilities

Hatchery & Culture Building

Machine Building

Suction Pump House

Sea Water Reservoir Tank

Annex Buildings (Security guard house, Workshop)

Annex Facilities (Chlorella & other breeding tanks, Treatment tank, sedimental pond)

Training Equipment

Overhead projector, LCD projector, GPS, binocular, etc.

Laboratory equipment

Drying shelter, precision balance, glass ware, bathing water thermo, freezers, refrigerators, centrifuge, PCR thermo-cycle, binocular microscopes with photo-attachment, autoclave, incubators, clean bench, DO meter, water analysis kits, pH meter, etc.

Equipment for brood stock and breeding

3t live fish transportation boat, 2t pick-up truck with live fish tanks for seeds transportation, fork lift vehicle, wheelbarrow, high pressure washer, water pumps, balance, hose, aqualung set, fish net, small generator, FRP tanks, etc.

[Additionally requested items]

Dormitory for trainee

Mini bus

[Items eliminated from the original request]

Office Equipment and Furniture

Photocopies, fax machine, phones, filing cabinets, desks, chairs, shelves, television, digital camera, computers, hardware and software, internet system, color jet printers, etc.

MINUTES OF DISCUSSIONS
ON SECOND BASIC DESIGN STUDY
ON THE PROJECT
FOR CONSTRUCTION OF MARINE AQUACULTURE DEVELOPMENT CENTER
IN KINGDOM OF CAMBODIA

Based on the results of the Preliminary Study and supplementary information provided by Kingdom of Cambodia (hereinafter referred to as "Cambodia"), the Government of Japan decided to conduct a Basic Design Study on the Project for Construction of Marine Aquaculture Development Center (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Cambodia the First Basic Design Study Team, which was headed by Mr. Satoshi Chikami, Senior Advisor, JICA, and stayed in the country from 2nd to 21st October 2008. Under certain viability confirmed through collected information by the Team and the discussions between both sides, JICA sent to Cambodia the Second Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Satoshi Chikami, Senior Advisor, JICA, and is scheduled to stay in the country from 2nd to 26th December 2008.

The Team held discussions with the officials concerned of the Royal Government of Cambodia (hereinafter referred to as "RGC") and conducted a field survey at the study area.

As a result of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Phnom Penh, 24th December, 2008



Satoshi Chikami

Leader
Basic Design Study Team
Japan International Cooperation Agency



Director General
Fisheries Administration
Ministry of Agriculture, Forestry and Fisheries

ATTACHMENT

1. Objective of the Project

The objective of the Project is to develop marine aquaculture in Cambodia through development of basic technology on marine aquaculture, supply of seeds of marine aquaculture, and provision of education, technical training, and consultation opportunities to private marine aquaculture farmers and other related stakeholders.

2. Project site

The site of the Project is in Sihanoukville, south-west of Cambodia as shown in ANNEX-I.

3. Responsible and Implementing Agency

3-1. The Responsible Agency is the Ministry of Agriculture, Forestry and Fisheries.

3-2. The Implementing Agency is the Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries.

4. Items Requested by RGC

The Team discussed with Cambodian side on the planed activities of Marine Aquaculture Development Center (hereinafter referred to as "the Center") based on the analysis made in Japan.

After discussions, both sides agreed with the revised activity plan of the Center as shown in Annex—II.

The Team also confirmed on the appropriateness of requests of Cambodian side on components of the Project, the items described in Annex—III were finally requested from Cambodian side.

JICA will review the appropriateness of the requests and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

The Cambodian side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by RGC as explained by the Team and described on the Minutes of Discussions signed on the Preliminary Study on 12th July 2007 and the First Basic Design Study on 8th October 2008. The Team explained that there would be some changes on the procedures of Japan's Grant Aid scheme and that the renewed procedures might be explained by another Basic Design Study Team for explanation on the draft final report around the beginning May, 2009.

6. Schedule of the Study

6-1. JICA will prepare the draft final report in English and dispatch a mission in order to explain its contents around the beginning May, 2009.



6-2. In case that the contents of the draft final report is accepted in principle by RGC, JICA will complete the final report and send it to RGC by the end of June, 2009.

7. Other relevant issues

7-1. Operation and Maintenance

The Cambodian side will secure the necessary budget and personnel for implementation of the Project and for operation/ maintenance of the equipment and facilities, for which the Japanese side has been confirmed by RGC the following aspects:

- i) RGC is requested to provide appropriate annual budget of eighty thousand US dollars (US\$80,000) from the regular government budget to supplement the Center's operations and maintenance.
- ii) The Ministry of Agriculture, Forestry and Fisheries has already proclaimed the organizational setup and the personnel assignment to the Center.

7-2. Obligation of Cambodian Side for the Project

Both sides agreed that following matters were required to be executed by Cambodian side after the approval of the Project from Japanese government and prior to the commencement of the building work on the Project by Japanese side.

- i) to carry out land clearance and leveling,
- ii) to secure electricity supply to the site and telephone line,
- iii) to secure the water supply(water service) to the site,
- iv) to secure the area for seawater intake and discharged pipelines,
- v) to construct gate and fence around the site,
- vi) to relocate two families and their houses at the present entrance of the Center, and
- vii) to provide general office furniture and equipment of the Center

7-3. Stake holders' Meeting

The Cambodian side recognizes the importance of holding stakeholder meeting in order to inform the influence which will be caused by the construction of the Project.

The Cambodian side held an explanation session for the stakeholders on outline of the Project on 17th December, 2008 in collaboration with the Team. If necessary, the Cambodian side agreed to hold another explanation session for gaining better understanding and agreement on the Project and to send the result(s) to JICA.

7-4. Process of Environmental Impact Assessment (EIA)

①The Cambodian side explained the Team that IEE procedure has been completed and

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approved by the Ministry of Environment.

②The Cambodian side explained the Team that Environment Impact Assessment (EIA) is not required for the Project according to the laws and regulations in Cambodia.

7-5.Coordination with Other Development Plan

There are some development plans in Sihanoukville which might affect the Center development and operation. A delegation composed of both sides held a consultative meeting with the officers concerned of the Port Authority of Sihanoukville (PAS) on 19th December 2008. As a result, it is confirmed that PAS does not have any project or future plan that will affect operation of the Center. The Cambodian side agreed to have continued coordination with the related organizations.

- ANNEX-I Location Map of the Project Site
- ANNEX-II Marine Aquaculture Development Center activity plan revised in December 2008
- ANNEX-III Items requested by RGC

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Marine Aquaculture Development Center(MADeC) activity plan revised in December 2008

	FIA original plan	Revised plan
Target species for Mass seed production	<i>Lates calicarfer</i> ; Short term target species for mass seed production	← ditto
	<i>Macrobrachium rosenbergii</i> ; mid-long term target species for mass seed production	<i>Macrobrachium rosenbergii</i> ; short term target species for mass seed production
	<i>Penaeus monodon</i> ; Short term target species for mass seed production Snapper long term Grouper; short term Sand gobby mid long	<i>Penaeus monodon</i> ; short & mid term target species to establish the stable seed production technology ← ditto ← Grouper; mid long term ← ditto
Training activities (Technical extension)	1 st year--; Identify /Extract Problem 1 st year & 2 nd year--; Extension planning 2 nd year--; Pilot farm planning 3 & 4 year--; Implementation of pilot farm	Add; Training & Enlightening Activity plan; See Training & Enlightening Activity Plan for MADeC (A-1,2,3,and 4)
Natural Resources Management (Fish seeds)	Seed production for propagation & Release, monitoring	Execute in mid and long term activity
Fish Health and Epidemic control	Establish the techniques within 5 year Disease Prevention, diagnosis and treatment activity start from 3 rd years	See Fish Health and disease Activity Plan for MADeC (C-1,2)
Natural marine environment research	Make plan in 2 nd and 3 rd year, and activity start from 3 rd year	See Coastal Environment Monitoring for Sustainable Aquaculture (B-1)
Sustainable shrimp culture (<i>P. monodon</i>)	Make plan in 2 nd and 3 rd year, and activity start from 3 rd year	← ditto
Fish feed and feeding	Feed for different life stages (larva, fingerling, sub-adult and adult)	← ditto

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Training & Enlightening activity plan for Marine Aquaculture Development Center(MADeC)

	Subject	Time; frequency	Place	Candidate	Method
A: Training & Enlightening	A-1; Aquaculture training for grow out tech. (short)	4 term /yr, 1-2 week/ term, 20-40 person per/ term	MADeC, Aquaculture farm	Aquaculture farmers, extension staff	Lecture and practical training on basic techniques
	A-2; Training of breeding and nursing tech. (mid - long)	1 term /yr, 2 month/ term, 10-15 person per/ term	MADeC, Aquaculture farm	Aquaculture farmers	Lecture and practical training on basic techniques
	A-3; Training for Univ. & Graduate school students	1 term /yr, 2month(3weeks) / term, 20-30person per/ term	MADeC, Aquaculture farm, Agri. Univ. in PP	Univ. & graduate school students	Cooperation with Agriculture Univ. and colleges
	A-4; Open MADeC for Public	2 term/year	MADeC	Elementary school students	Observation aquatic organism by microscope etc,
B; Aquaculture technology and coastal environment monitoring	B-1; Coastal environment monitoring for sustainable aquaculture	Monthly	Aquaculture farm, coastal area, MADeC water intake and discharge point	To be carried out by MADeC staff and Provincial fisheries staff	Water quality and bottom soil condition analysis & monitoring
C; Fish Health, disease and fish nutrition	C-1; Seminar for government staff	2 term /yr, 1week/ term, 10-15 person / term	MADeC, Aquaculture farm	MADeC staff and provincial fisheries staff	Seminar on diagnosis, prevention of fish disease by Expert from SEAFDEC etc.
	C-2; Seminar for Aquaculture Farmer, NGO	1 term /yr, 5 days/ term, 20-30 person per/ term	MADeC, Aquaculture farm	Aquaculture farmer, NGO staff can help aquaculture farmer	Seminar on diagnosis, prevention of fish disease by MADeC staff
	C-3; Feed and Feeding seminar	1 term /yr, 5 days/ term, 20-30 person per/ term	MADeC, Aquaculture farm	Aquaculture farmer, NGO staff can help aquaculture farmer	Seminar on feed and feeding for different life stages of finfish and crustacean