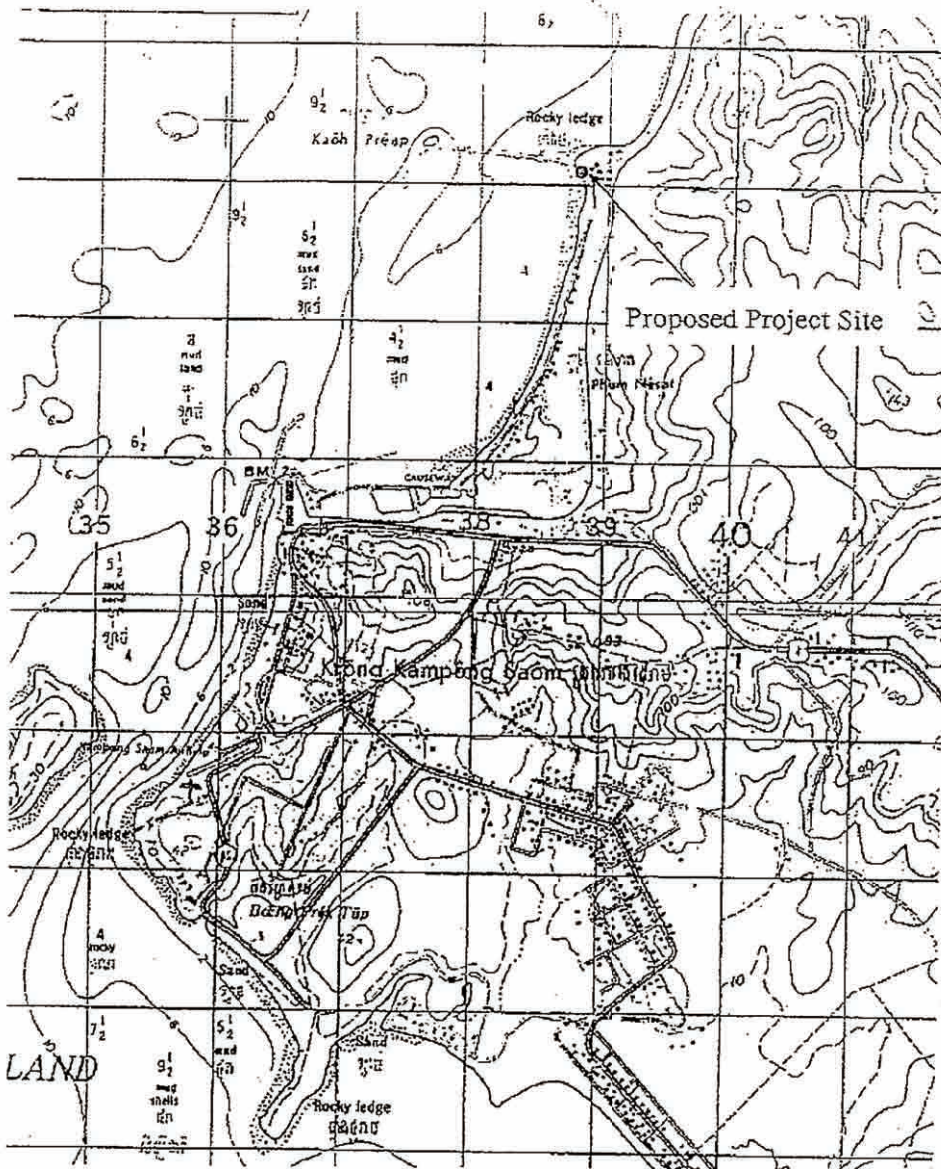


Location Map of the Project Site



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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

[Items requested by RGC]

1. Facilities and systems

Administration Building
Brood Stock & Culture Facilities
Hatchery & Culture Buildings
Machine Building
Suction Pump House
Reservoir Tanks
Annex Buildings (Security guard house, Workshop)
Annex Facilities (Chlorella & other breeding tanks, Treatment tank, sedimental pond)
Dormitory for trainee

2. Equipment

Training Equipment

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

Laboratory equipment

Drying shelter, precision balance, glace 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)

Soft component (Engineering Supporting Services) for operation and Management of Facilities

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MINUTES OF DISCUSSIONS
ON
THE BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION OF MARINE AQUACULTURE DEVELOPMENT
CENTER
IN
KINGDOM OF CAMBODIA
(EXPLANATION OF DRAFT FINAL REPORT)

In October 2008 and December 2008, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched two Basic Design Study Teams on the Project for Construction of Marine Aquaculture Development Center (hereinafter referred to as "the Project") to Cambodia, and through discussion, field survey, and technical examination in Japan, JICA prepared a draft report of the study.

In order to explain and to discuss with the officials concerned of the Royal Government of Cambodia (hereinafter referred to as "RGC") on the components of the draft report, JICA sent to RGC the Draft Report Explanation Team (hereinafter referred to as "the Team"), headed by Mr. Kunihiro NAKASONE, JICA, and was scheduled to stay in the country from 26th to 30th April, 2009.

As a result of discussion, both parties confirmed the items described on the attached sheets.

Phnom Penh , 29th April, 2009

仲宗根 邦宏



Kunihiro Nakasone
Leader
Draft Report Explanation Team
Japan International Cooperation Agency
(JICA)

Nao-Ehuok
Director General
Fisheries Administration
Ministry of Agriculture, Forestry and Fisheries
Royal Government of Cambodia

ATTACHMENT

1. Components of the Draft Report

The Cambodian side agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid scheme

The Team reconfirmed the Japan's Grant Aid Scheme and the necessary measures to be taken by the Cambodian side as explained by the Team and described in Annex-2, Annex-3 and Annex-4. The Team also explained that, since October, 2008, the role of JICA had been changed to include direct responsibility for implementation of the Project until completion of the construction and it is therefore necessary to have Grant Agreement (G/A) signed by JICA and Ministry of Economy and Finance, Cambodia at the same time of Exchange of Notes (E/N) signed by Embassy of Japan and Ministry of Foreign Affairs and International Cooperation, Cambodia.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to RGC by the end of June, 2009.

4. Confidentiality of the Project Cost Estimation

The Team explained the cost estimation of the Project as described in Annex-1. Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outside parties before signing of all the contract(s) for the Project. Cambodian side understood that the Project Cost Estimation described in Annex-1 is a provisional one as a result of the Study and could be subject to change according to further examination by the Government of Japan.

5. Other Relevant Issues

5-1. Cambodian side shall implement the following works, before commencement of the construction.

1) to carry out land clearance and leveling for the Project site(hereinafter referred to as "the Site

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- 2) to secure electricity supply, water supply and telephone line to the Site,
- 3) to secure the land and sea area for seawater intake and discharged pipelines,
- 4) to construct gate and fence around the Site, and
- 5) to relocate two families and their houses at the present entrance of the Site.

5-2. In view of the fact that the Project needs advanced technology and a lot of cost for implementation of the Project and for operation/maintenance of the facilities and equipment, Cambodian side shall secure an annual budget of 80,000USD per year for five years from 2011.

5-3. Cambodian side will submit a budget forecast and a personnel lineup for operation, maintenance and implementation for MADeC to JICA Cambodian Office by the tendering of the Project.

5-4. Cambodian side will promote the collaboration of related organizations such as the Inland Fisheries Research and Development Institute (IFReDI) to enhance the effectiveness of the Project.

Annex-1 Project Cost Estimation

Annex-2 Japan's Grant Aid

Annex-3 Major Undertaking to be taken by Each Government

Annex-4 Tentative schedule of the Project

