Brief Report of Student Internship at the TNC Fish Culture Project Loh Mbongi 28 July to 28 August, 2003

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Following requests from the Fisheries High School at Sape, east Sumbawa, a group of 6 students were invited to carry out a training and work experience programme at the hatchery facility at Loh Mbongi.

This training course aimed to:

a) help in the development of a fish culture industry in the Komodo area by demonstrating existing hatchery and ongrowing technology, and the feasibility of a fish culture industry in the area.

b) promote interest in the industry locally, and attract potential recruits to any fish culture operations.

c) provide training in grouper culture

d) Improve community awareness in the Sape area in both the Fish Culture Project and other activities of TNC in the area.

Schedule for work experience & training

Following a day of orientation on 29th July, the students were given the opportunity to gain experience in live food production, hatchery and cage production techniques.

The following organization schedule devised:

Student	***30/7 – 07/08***	***08/08 – 17/08***	***18/08 – 27/8***
Ridwan Umar NRP.0122	Live feed	Hatchery	Cages
Nurwahidah H. Ismail NRP. 0120	Live feed	Hatchery	Cages
Nurwahidah H. Malik NRP.0119	Cages	Live feed	Hatchery

Student	***30/7 – 07/08***	***08/08 – 17/08***	***18/08 – 27/8***
Eti Kurniati NRP. 0099	Cages	Live feed	Hatchery
Munawar NRP. 0113	Hatchery	Cages	Live feed
Halimah NRP. 0104	Hatchery	Cages	Live feed

Training was provided in the following areas:

Live feed production

Disinfection and sterilisation of culture apparatus.
Preparation of fertiliser solutions.
The culture of *Nannochloropsis* algae.
The large-scale culture of rotifers.
Counting rotifers
Enrichment of rotifer cultures
Production of artemia nauplii

Larval rearing and nursery techniques

Incubation of eggs
Stocking of larval rearing tanks
Provision of algae, rotifers, artemia and artificial feeds to larval and nursery tanks
Routine cleaning and husbandry operations
Basic microscopic examination of fish larvae
Transfer and grading of juveniles within the nursery
Feeding and application of medications to juvenile fish.
General fish husbandry in the nursery
Biological record-keeping
Transfer of juveniles to cages

Cage production

Feeding and routine maintenance of broodstock
Cleaning and maintenance of cage nets
Routine treatments for broodstock
Egg collection and transfer to hatchery

Routine feeding and husbandry of juveniles in grow-out cages

Provision of bath and oral treatments to cage-reared juveniles.
Counting and grading of cage stock.
In addition to the routine training, the following activities were followed:

9th August: assist with the visit of the Minister for Fisheries and Marine Affairs and opening ceremony.

17th August: join Indonesia Independence Day celebrations, Labuan Bajo

30th August: visit Nautika High School, Labuan Bajo.

Theory training schedule

Date	***Subject***	***Trainer***
12/08/03	Broodstock and grow-out	Eddy Bataona Mariculture Officer
13/08/03	Live feed culture	Marda Mulyawati Mariculture Officer
16/08/03	National Park Surveillance	Abubakar Pasya Surveillance Officer
27/08/03	Biological Monitoring, KNP	Katherina Monitoring Assistant
27/08/03	MPA as a tool for sustainable fisheries.	Sudaryanto Mariculture Coordinator
27/08/03	The Nature Conservancy	Maryam Community Outreach Asst.
27/08/03	Fish health	Dr. Fris John, Gondol

All students appeared keen and enthusiastic throughout the duration of the training course.

Examples of typical questions asked by the students during these training sessions are as follows:

> Are there plans to develop fish culture operations within the Komodo National park?

Will the TNK regional office in Sape be re-established?

What action does the TNC monitoring team take on the discovery of recently bomb-damaged coral reef within the National park?

How much time does damaged coral take to recover?

How large is a new-born whale?

What is the primary cause of coral reefs 'dying'?

Why is TNC working in the Komodo National Park?

What are the main motives for destructive activities within the Komodo National Park?

Evaluation

All students were given an examination to test their knowledge of mariculture operations and theory at the end of their training course. Three students passed on the first attempt, the other three required a re-examination before passing. All evaluations were carried out by Mariculture Officers.

Reports

All students were asked to provide an individual report in addition to a group report.

All thanked TNC for providing the training and work experience course, and confirmed the difficulty in gaining this type of experience from other sources. All showed a particular interest in the non-mariculture activities of TNC in the Komodo area.

All requested an additional 30 days of internship at Loh Mbongi. However, an additional 6 students were invited to replace the original 6 for a further 30 days of training and work experience, in order to maximise exposure to the project, and TNC's activities in the area.