

TFET- Funded

Grant No. 8190-TIM (TF)

**Hera Port Fisheries Facilities
Rehabilitation Project**

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A. Summary

In June 2001, the World Bank informed ADB's Special Office in Timor-Leste that \$1 million from the Second Agriculture Rehabilitation Program (ARP II) had been set aside for the rehabilitation of Hera fishing port, located around 16 kilometers east of Dili. ADB was requested to execute this particular Project given its experience in fisheries projects in small countries in the Pacific region.

Fact-finding mission took place in the period 10-23 July 2001 and on 17 October 2001 the Project was approved and was subsequently declared effective on 27 October 2001. Due to limited capacity within the Fisheries Division, the procurement officer from ARP II was included in the Project Management Unit. Tender documents were issued to the shortlisted firms in December 2001, and after additional information and clarification had been submitted to shortlisted firms, the deadline for submission of proposals was extended until end of March 2002. An ADB consultant in Manila undertook a special evaluation of the technical proposals and contract was awarded to Wakachiku Construction Co. pending rectification of the quantities of the required steel H-piles. Contract was finally signed in August 2002 and work began in September 2002.

All these procedures delayed the commencement by nearly 12 months and the monsoon season 2001-2002 saw further erosion of the breakwater core material and subsequent erosion/damage to the revetment wall west of the breakwaters. After mobilization, the work has progressed fast and all breakwaters and face-walls of the harbor basin are constructed. Dredging is almost completed, and good progress is made on the adjacent aprons of the harbor basin. Extra work needs to be carried out on the revetment wall.

An additional \$77,000 has been allocated from the Consolidated Fund for East Timor (CFET) money to cover new construction of navigation lights, storage tanks, and fuel pipes.

B. Background

1. Rationale of the Project

The inshore marine resources of Timor-Leste are limited and vulnerable to overfishing, while the offshore resources of smaller pelagic species are fast growing and in robust abundance. To catch such species of sardines and smaller mackerels larger fishing boats are needed and hence the need for a dedicated fishing harbor.

2. Project Objective and Intended Outputs

The Project's overall objective is to contribute to sustained food security of marine protein for the people of Timor-Leste. The scope of the Project is relatively modest comprising rehabilitation and strengthening of three individual breakwaters totaling approximately 140 meters (m) in length, and rehabilitation of the wharf faces of the harbor basin totaling approximately 400 m. In addition, dredging of the harbor basin, and pavement of the aprons and side areas of the harbor basin will be carried out. The Project will emphasize as much use of

local labor, local purchase of materials, and lease and hire of equipment from people of Timor-Leste as possible. Furthermore, the Project will incorporate training of Timor-Leste people at all levels in harbor construction, as no such capacity is presently available locally.

3. Cost, Implementing, and Executing Arrangements

Total costs for civil works, goods and related services, and supervisory consultancy services are estimated at \$766,000 and contingencies at \$132,000. The Ministry of Agriculture, Forestry and Fisheries is the executing agency, and a Project Management Unit within the Division of Agriculture Affairs oversees the implementation of the Project. Weekly site meetings are held between the contractor, the supervisory engineer, ADB representatives from its Timor-Leste office, and the Department of Fisheries.

4. Intended Impacts

The intended impact of the Project is increased landings of smaller, fast-growing, and therefore affordable fish for the poorer strata of the population and at the same time achieve sustainable management of the inshore resources, which are vital for most subsistence fishers' livelihood.

C. Implementation Performance

1. Achievement of Outputs

After the initial delay with rectification of quantities and contract awards, the construction has progressed rapidly but is currently about 2 weeks behind the estimated work program. The 2001–2002 monsoon season did cause considerable erosion to the harbor structures and additional core material for the breakwaters had to be re-estimated and new quantities added to the contract, and the material to be dredged in the harbor basin had also increased during that period. As of 10 May 2003 the following have been completed: (i) all breakwaters, (ii) piling and concrete slabs on face walls, (iii) capping beam, deadman, and tie-rods, and (iv) western revetment. Work is progressing on the aprons around the basin, and dredging of the harbor basin is 75% completed. It is estimated that all original construction work can be completed by end of May or beginning of June 2003. Outstanding issues are the extra work funded by the CFET involving navigation lights, fuel storage and fuel pipes. However, this work has been initiated.

2. Costs

The civil works was contracted at a price of \$733,933. The original quantities of scope of work have all been within the contract amount. However, the delayed project implementation caused further erosion of some harbor structures, and additional and/or improved civil works have necessitated three variations to the original contract. The extra amounts have been covered from the contingencies.

3. Procurement and Construction

All procurement has been without any problems. The delay in the original work program has been the result of the Project's deliberate effort to employ and engage as many local people to participate in the construction as possible. Before commencement of work, the heads of the surrounding villages were consulted on how best to engage the local people and at the same time provide some training in construction techniques, placement of armor-rock for breakwaters,

etc. The solution agreed upon was the mobilization of a new group of people every 5 weeks. This solution was probably the most socially just but it also created two problems: (i) the

contractor had to train new people every 5 weeks and naturally incurred delays in such process; and (ii) on a couple of occasions the people in work were extremely reluctant to be laid off after the 5 weeks. In the interest of spreading the work benefits as wide as possible, ADB did not want to change the agreed upon solution and the contractor was informed accordingly.

4. Organization and Management Performance

A supervisory engineering firm was awarded a contract to oversee the project implementation. Weekly site visits have been held and all issues were discussed up front and rectified where possible. The supervisory engineer also played an important role in evaluating the cost of the additional work to be undertaken and for which variations were issued. Detailed minutes from site visits were sent every week to ADB.

D. Project Impacts

1. Socioeconomic Impacts

The impact from the construction of the harbor itself is difficult to quantify at this stage because the intended impact of the Project will affect the subsequent fishery for the smaller pelagic fish species and resulting affordability of fish protein for the people of Timor-Leste. However, the economic benefits to the people who were engaged directly as laborers as well as the Timor-Leste private sector who was contracted to supply all aggregates, core material and armor rock, have been substantial. In total the Project will have employed a total of 831 people by completion of the work using about 12% of the contract value (US\$101,000) on local wages, and the private sector was involved in supply of goods and services of around 34% of the contract value.

The Project objective is to make enough affordable fish protein available for the people of Timor-Leste. Animal protein is at the moment expensive but at the same time an important dietary requirement in the absence of a wide variety of other foods. Fish landings in the past have been sustained at levels above what is needed to feed the people of Timor-Leste with the minimum required of fish per capita per year according to FAO's recommendations, and the Project's goal is to reach 50% of that level by year 2006.

2. Environmental Impacts

As the Project was a rehabilitation project, no adverse environmental issues are associated with the actual harbor structures. During implementation, the Project has taken prudent steps to minimize noise and dust, and accidentally spilled aggregates on public roads by the project-hired lorries were on every account cleaned up. Dredged material from the harbor basin has been used as landfill within the harbor perimeter and subsequently graded and compacted, thus increasing the useable area of the harbor.

The longer-term environmental impact of the Project is clearly to reverse the unsustainable fishing of the inshore resource and also achieve a sustainable fishery for the smaller offshore resources.

3. Impacts on Capacity Building

The many unskilled workers employed by the Project have received useful training in the special requirements for marine structures construction. This should ensure a certain level of sustainability for the maintenance work of the harbor in the future. Also the operators of machines involved to place the heavy armor rock as the outer protection on the breakwaters should ensure that skills have been developed for future projects or maintenance involving coastal erosion or harbor development.

E. Overall Contribution to the Economy

Besides the immediate benefits to local laborers and local contractors— amounting to almost 34% of the original contract value—the Hera port itself is expected to facilitate the development of the offshore fishing, which over a period of 5 years would result in an incremental catch of 1,360 tons as compared to the without-project scenario. The with-project situation will result in an increased intake of fish protein from 8% to 56% of the FAO recommended per capita daily consumption of fish as compared with an increase from 8% to 28% in the without-project situation. The economic internal rate of return is calculated at 87%, under the assumption that the Government will promote the development of the traditional offshore fishing vessels.

It is difficult at this juncture to talk about lessons learned due to the urgency of rehabilitation of key infrastructure after Timor-Leste separated from Indonesia. However, in order for the offshore fishery to develop to the benefit of the Timor-Leste population at large, it is imperative that a supporting Fisheries Act and associated Regulations are in place. Especially for a new nation as Timor-Leste, it is noteworthy that the fisheries sector as a whole is one of the most secretive with respect to transparency, and unless early attempts are made to incorporate transparency in all aspects of the Fisheries Act and Regulations, Timor-Leste may find itself in the same sorry situation as most other coastal states with overfishing of valuable resources and a resource rent far below its potential.

F. Continuing Needs and Investment

Experience from other smaller countries has clearly shown that the Government's role in fisheries should be regulatory and at the same time provide the necessary infrastructure for the best result of a private sector led industry. With the completion of Hera port, the most urgent issue is to formulate the Fisheries Act and its Regulations.

The various facilities to support the industry should all be operated by the private sector and Hera port has ambient space for this to happen. A key role for the Government at this juncture is to carefully screen the taxation environment governing the fishing industry in order to bring it on par with regional comparativeness.

Except for possible credit facilities to promote the particular offshore fisheries targeted with this Project, there is at present no need for further investment by the Government in the sector. Once Timor-Leste achieves an enabling, but controlled business environment for its fisheries, the local private sector should be very able to invest themselves.