

Country Name	The Project for Construction of Fish Market Center at Majuro Atoll
Republic of the Marshall Islands	

I. Project Outline

Background	<p>In “National Strategic Development Plan: Vision 2018”, the long-term national development plan, the first priority was to pave the way to economic self-reliance, and the development of fishery industry was a center of this plan since it is the sole potential sector for self-sustaining. The fishery development plan focused development of coastal fisheries; in particular, promotion of fisheries of outer islands. While Majuro, a capital of the country, has been a major destination of consumption, the marine products have been landed at the four major outer islands, Arno, Aur, Maloelap and Jaluit. However, only two aged boats owned by the Marshall Islands Marine Resource Authority (MIMRA) were available for transportation between the supply bases and the demand site. The aged boats limited their roles to transport marine products landed at the outer islands. In addition, the Outer Island Fish Market Center (OIFMC), which was located in the industrial area of Majuro, was not appropriate for marketing fresh fish due to a long way from residents’ area, and the limited spaces and sales facilities. Therefore, installation of functional boats to transport marine products and development of fish market in Majuro was a key issue for the country.</p>				
Objectives of the Project	<p>To increase in the volume of fresh marine products landed at the outer islands to be supplied in Majuro Atoll by construction of fish market center, installation of fish collection boats and implementation of technical trainings of handling of fresh marine products in Majuro Atoll.</p>				
Outputs of the Project	<p>1. Project Site: Uliga, Majuro Atoll 2. Japanese side <u>Construction of fish market:</u> Total floor area of 406.0 m², including fish market building, ice making machine, ice storage, chilled storage, etc. and mooring facility <u>Procurement of market equipment:</u> Fish carrying boxes, carts, fish storage boxes, insulated containers, band saw, high pressure water washer, and fish collection boats (2 boats) <u>Technical Assistance (Soft Components of Grant Aid):</u> Support for improvement of quality control technique for fresh fish, improvement of landing and handling of fish, etc. 3. Marshall Islands’ side: <ul style="list-style-type: none"> • Securement of construction site, incoming of electricity line and water pipe, implantation of shrubs in the construction site and coral in the construction waters, demolition of wastes, relocation of radio antennas, planting and installation of furniture. </p>				
Ex-Ante Evaluation	2009	E/N Date	March 27, 2009	Completion Date	February 25, 2011
Project Cost	E/N Grant Limit: : 825 million yen, Actual Grant Amount: 769 million yen				
Implementing Agency	Marshall Islands Marine Resources Authority (MIMRA)				
Contracted Agencies	Fisheries Engineering Co., Ltd., Dai Nippon Construction,				

II. Result of the Evaluation

1 Relevance	<p>This project has been highly consistent with Marshall Islands’ development policy, such as provision of opportunities for earning cash for local fisher and fostering of the outer island fisheries specified under “National Strategic Development Plan: Vision 2018” and “National Fisheries Development Plan”, and development needs for fresh fish in Majuro at the time of both ex-ante and ex-post evaluation. It was also consistent with Japan’s ODA policy to Marshall Islands to support installation of infrastructure and equipment for improvement of marine products distribution included in one of the priority areas of “Industrial Development” at the time of ex-ante evaluation. Therefore, relevance of this project is high.</p>
2 Effectiveness/Impact	<p>The project has limitedly achieved its objectives of “increasing in the volume of fresh marine products landed at the outer islands to be supplied in Majuro Atoll”. The volume of fresh fish supplied to OIFMC from the outer islands, such as Aur, Arno, Maloelap and Jaluit in 2013 was 47.35 tons/year which was far below the target of 100 tons/year though increasing from 23 tons/year in 2007. The sales volume of fresh fish at OIFMC was 32,433kg/year in 2013 which was below not only the target of 96,922kg/year but also the actual value of 46,466kg/year in 2007. That has been because of incidence of fish’s disease named Ciguatera, which is a foodborne disease by eating reef fish contaminated with toxins produced by planktons in tropical waters of Jaluit and Arno. Also, there have been difficulties for the boats to transport fish constantly and efficiently from the target islands to OIFMC due to the following issues; (i) broken refrigerators at the islands to preserve caught fish, (ii) broken communication devices at the islands to report catches of fish to OIFMC. Therefore, 117 times^(Note1), which was the number of times collecting fresh fish by the installed boats in 2013, was unable to reach the target value 178 times^(Note2).</p> <p>On the other hand, the quality of fresh fish has improved by utilization of proper handling skills instructed by the soft component (technical support) of the project. The market facilities offered additional services to customers, such as filleting, descaling, grilling and gutting, and deboning.</p> <p>As for the impacts, the annual sales revenue for the target outer islands considerably expanded from the annual average of</p>

49.26 million USD for the period between 2005 and 2007 to 323.5 million USD in 2013. The reasons for increase of the annual sales revenue could include ^(Note3); (i) increase in the cost price of certain fish, (ii) increase in the selling price of fish, and (iii) increase in the number of customers at OIFMC. The project can be considered to contribute to the increase of selling price as quality of products has improved through improvement of the fish freshness and values added by the implementation of the soft component. Similarly, the increase in the number of customers is also attributed by the project, since the project relocated OIFMC to the location which is more convenient and accessible to customers in comparison with the original location before the project. However, these could be also brought about by the other technical support by JICA Senior volunteer (2012-2014) and experts of Overseas Fisheries Cooperation Foundation of Japan (OFCF), who developed and introduced the marketing promotion plan, value added processing methods and clean operation of sales facilities and service to customer's request. Without the detail data concerning the price of fresh fish and the trend of number of OIFMC's customers, it is difficult clarify to what extent this expansion of sales revenue was brought about solely by the project, while it is also difficult to deny some contributions of the project. No land acquisition, resettlement and negative impacts were observed at the time of ex-post evaluation.

Therefore, considered a comparison between the actual value at the time ex-post evaluation and the target value which was set at the planning stage by the agreement between the implementing agency and JICA, effectiveness/impact of this project is low.

Note 1: This actual value includes 25 times which was the number of times collecting fresh fish from the islands unexpected at the time of Basic Design.

Note 2: According to the MIMRA, a rise in the fuel price is considered as one of factors, which affected few number of times collecting fresh fish from the installed boats.

Note 3: OIFMC sells only fresh fish supplied from the outer islands, but not other products.

Quantitative Effects

Indicators	(Before the project) 2007 Actual	(After the project) 2014 Planned	2013 Actual	(Ex-post Evaluation) 2014 Actual (January to April)
Indicator 1: The annual total volume of fresh fish supplied to OIFMC from the outer islands	23 tons/year	Approximately 100 tons/year	47.35 tons/year	21.08 tons/year
(Supplemental Information) Annual sales volume of fresh fish at OIFMC	46,466kg/year*	96,922 kg/year* (114kg/day)	32,433.06 kg/year	18,065.35kg/year

Source : Basic Design Report (2009), OIFMC Market Data 2014

Note: *The sales volume is estimated by the expected sales loss of 5% due to the improvement of handling efficiency and quality control.

o3 Efficiency

The both of project cost and project period were below the plan (ratio against the plan: 93% and 96%). Therefore, efficiency of this project is high.

4 Sustainability

OIFMC, under the Coastal Communities Service Department of MIMRA is responsible for Operation and Maintenance (O&M) of the fish market center and the fish collection boats installed by the project.

The implementation structure is sustained to provide a transport between outer islands and Majuro and supply fresh fish landed at the outer islands. The sufficient number of staff has been deployed for O&M of the market center as well as fish collection boats: 11 staff, including the manager, for the market center and 6 staff for the two boats. In addition, the JICA senior volunteer in the fishery development area (October, 2012 to September 2014) contributed to improvement of management and maintenance of the market facilities such as introduction of personnel management using timecard, improved cleanup of the facilities, and so on.

In technically, the technical staffs of the Workshop Section of the Coastal Communities Service Department have adequate level of skills. Also, the staff of the market center and the crew of the boats have adequate skills and knowledge to handle the market facilities and the boats. The manuals for landing and handling of fresh fish developed by the project have been utilized. The MIMRA mechanics are on-hand to assist boat crews in troubleshooting and addressing major repairs. Training for the mechanics is annually conducted in-house with assistance from the OFCF. The MIMRA mechanics also do regular checks on the facility to ensure that operations run smoothly.

As for financial aspect, the revenue of OIFMC including the own revenue and the budget from MIMRA, has sufficiently covered the necessary expenditure, including O&M cost of the facilities and the boats installed by the project which amounted 6,440 USD in 2013. For the same year, the own revenue of OIFMC was 323,545 USD and the budget from MIMRA was 355,857 USD. The cost driver for OIFMC was the electricity cost which has been covered by MIMRA. Although the solar power system installed by the project had not been functioning for 14 months until February 2014 since the inverter was installed in unsuitable place, it is expected that it can contribute to reduction of electricity cost as it has been fixed. For the required periodical maintenance of the boats, OIFMC allocated the necessary amount of budget in 2014.

In terms of the current status of O&M of the market facilities and the boats, the Workshop Section of MIMRA conducts regular inspection once a week and carry out trouble shooting on demand. Also the Workshop Section has an inventory database of all the spare parts, materials and equipment. Although the ice making machine and the solar power system had been

malfunctioning and not fixed, they were fixed.

Therefore, the sustainability of this project effect is high.

5 Summary of the Evaluation

The project has limitedly achieved its objectives, “to increase in the volume of fresh marine products landed at the outer islands to be supplied in Majuro Atoll” since the actual volume of fresh fish supplied to OIFMC from the outer islands were less than the target volume which was set at the planning stage. On the other hand, the project contributed to improvement of handling fresh fish, better services of the market center to the customers, and the revenues of the outer islands through supply of fresh fish to OIFMC.

As sustainability, the sustainability of the project effects has been ensured by the adequate management structure for O&M of the market center and the boats, the sufficient skills and knowledge of the staff and the sufficient financial source of OIFMC.

In light of the above, this project is evaluated to be unsatisfactory.

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- It is recommended for MIMRA to repair and improvement of communication system between the OIFMC and fishing bases in outer islands for the implementation of more efficient collection of fish.

Lessons learned for JICA:

- Although it is difficult to clarify which factors mainly affected the expansion of sales revenue of OIFMC, it is observed at the time of ex-post evaluation that trainings provided under the soft component and technical support by JICA Senior volunteer were somehow contributing to improvement of the sales revenue of OIFMC. These activities seem to be appropriate to meet the demand and tendency of Fish Market Center’s customers. When designing the project including the development of marketing fresh fish as one of project purpose, JICA should cautiously consider the project design and components to be included from perspectives of the demand and preferences of customers as well as perspectives of improving the supply of fresh fish.



(Handling of fish improved by the project,)



(OIFMC and 2 fish collection boats)