

Country Name	The Project for Improvement of Equipment for Maritime Security Enhancement
Malaysia	

I. Project Outline

Background	The Strait of Malacca, one of the most important shipping lanes in the world, was prone to frequent piracy. In 2005, the Malaysian Maritime Enforcement Agency (MMEA) was established to maintain maritime law and order and undertake search and rescue (SAR) in an integrated manner. The Malaysian Sea Surveillance System (MSSS) was put under the jurisdiction of MMEA and reinforced, but it still covered 30% of the Strait as of 2005. Law enforcement was undertaken by the Marine Police Force (MPF) under the Royal Malaysia Police (RMP), but it lacked equipment for night watch activity and speed boats.				
Objectives of the Project	To enhance the capacity of MMEA and MPF in maritime surveillance, patrol, communications and control at the Strait of Malacca and the sea areas surrounding Malaysia by procuring equipment for MSSS and marine police activity.				
Outputs of the Project	<ol style="list-style-type: none"> Project Site: [For MMEA] Three (3) Area Control Centres (ACCs) in Langkawi, Klang and Johor; five (5) Remote Sensor Sites (RSSs) in Kemarong, Pulau Angsa, Bukit Jugra, Pulau Undan, and Tanjung Piai. [For MPF] MPF bases in Penang, Tampoi (Johor Bahru) and Lumut. Japanese side: [For MMEA] Laser Camera System (3 sets), Radio Direction Finder System (2 sets) (as planned). [For MPF] Night Vision Goggle (40 sets), Binocular Range Finder (40 sets), Digital Portable Radio (60 sets), Rigid Hull Inflatable boat (RHIB) (4 units) with initial training on operation of the equipment (as planned; specification of some equipment has been changed). Malaysia side: [For MMEA] None in particular. [For MPF] Domestic transportation of the boats. 				
Ex-Ante Evaluation	2007	E/N Date	[For MMEA] January 25, 2008 [For MPF] March 30, 2009	Completion Date	[For MMEA] February 12, 2009 [For MPF] September 24, 2010
Project Cost	E/N Grant Limit: : [For MMEA] 473 million yen [For MPF] 278 million yen Contract Amount: [For MMEA] 453 million yen [For MPF] 249 million yen				
Implementing Agency	[For MMEA] Malaysian Maritime Enforcement Agency (MMEA), Prime Minister's Department [For MPF] Marine Police Force (MPF), Royal Malaysia Police (RMP)				
Contracted Agencies	[For MMEA] Oriental Consultants Co., Ltd.; Marubeni Corporation [For MPF] Shipbuilding Research Centre of Japan; Marubeni Corporation				

II. Result of the Evaluation

1 Relevance	<p>This project has been highly consistent with Malaysia's development policy and development needs at the times of both ex-ante and ex-post evaluations. The relevant policies include the followings: the Kuala Lumpur Statement on Enhancement of Safety, Security and Environmental Protection in the Straits of Malacca and Singapore (2006)¹ aiming to promote international cooperation to ensure safety, security and environmental protection of the Straits; the 3rd Outline Perspective Plan 2001-2010 (OPP3) and the 9th Malaysia Plan (9MP) (2006-2010) aiming to enhance/expand the safety navigation system and strengthen marine patrol; the 10th Malaysia Plan (2011-2015) emphasizes on the enhancement of maritime infrastructure aiming to upgrade the current facilities to meet increasing needs and demands on the protection of regional maritime safety and security; and the Malaysia Maritime Strategic Planning Plan (MMSPP 2011-2040) lines up in stages (Chapter 5 Stage 2011-2015) the strategic operational plans to further upgrade and increase in numbers of search and rescue equipment in its maritime stations and bases, in order to uplift its monitoring/patrolling abilities.</p> <p>As for the development needs, there have been continuous needs to tackle illegal act around the Strait of Malacca through reinforcement of MMEA and MPF from the time of ex-ante evaluation to the time of ex-post evaluation. Also, the project was consistent with Japan's ODA policy to support the area that Malaysia cannot develop on its own as set in the Country Assistance Program (2002) and to introduce Grant Aid for Cooperation on Counter-Terrorism and Security Enhancement (to which this project was classified) at the time of ex-ante evaluation. Therefore, relevance of this project is high.</p>
2 Effectiveness/Impact	<p>The project has mostly achieved its objective of enhancing the capacity of MMEA and MPF in maritime surveillance, patrol, communications and control at the Strait of Malacca and the sea areas surrounding Malaysia.</p> <p>At MMEA, the equipment procured by this project are managed² and utilized mostly as planned³. A set of radio detection</p>

¹ A statement adopted at the Meeting on the Straits of Malacca and Singapore (Kuala Lumpur, 2006) organized by International Maritime Organization (IMO) and Malaysia, Indonesia and Singapore and attended by 28 countries and international organizations

² The equipment except radio and RHIB are categorized as high- technology general- purpose items with military potential according to the Export Trade Control Order. In the Minutes of Discussion on the Basic Design Study dated April 23, 2007, the Malaysian side and the Japanese side "confirmed that the equipment to be provided on the Project shall never be utilized for military purpose under any circumstances." ("7.Other Relevant Issues (3)")

³ After being installed at the initially planned RSSs, 1 of the 3 sets of laser camera system was moved to other RSS, which serves as a more

finder system at RSS Undan had not been operational from May 2014 to August 2014 because a lightning broke the computer to boot the equipment, but it was repaired and started operation in August 2014. With these equipment installed by the project at certain RSSs and more sets procured by MMEA for the other RSSs, full coverage of the major sea area under visual monitoring (Indicator 1) and radio monitoring (Indicator 2) was achieved.

At MPF, the equipment procured by this project is mostly well managed, but 11 out of 40 binocular range finders need to be repaired at the time of ex-post evaluation⁴. Nevertheless, with the equipment procured by the project, MPF became able to conduct night watch (Indicator 3), ensure secret communications between its bases and patrol boats (Indicator 4), and chase high speed illegal boats (Indicator 5).

As for impacts, number of inspection cases show enhanced security and safety through MMEA's activities, MPF reported some successful cases of capturing human trafficking and smuggling of migrants using RHIB and it could be viewed that the expanded patrol areas of MPF has contributed to effective and appropriate patrol. Although the arrest rate could be further improved, it could be viewed that this project has contributed to the improvement of marine surveillance in the Straits of Malacca with use of the equipment procured by this project.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators	Year 2007 (before the project) Actual value	Year 2010 (target year) Target value	Year 2010 (target year) Actual value	Year 2014 (ex-post evaluation year) Actual value
Indicator 1 [For MMEA] Coverage of visual monitoring by the laser camera system (for major sea areas of the Strait of Malacca)	66% Covered by 3 RSSs	100% Covered by 9 RSSs, of which 3 RSSs (Kemarong, Angsa, Jugra) are supported by this project	100% Covered by 9 RSSs, of which 3 RSSs (Kemarong, Angsa, Jugra) are supported by this project	100% Covered by 9 RSSs, of which 3 RSSs (Angsa, One Fathom Bank, Jugra) are supported by this project
Indicator 2 [For MMEA] Coverage of radio monitoring by the radio direction finder system (for major sea areas of the Strait of Malacca)	66% Covered by 2 RSSs	100% Covered by 6 RSSs, of which 2 RSSs (Undan, Piai) are supported by this project	100% Covered by 6 RSSs, of which 2 RSSs (Undan, Piai) are supported by this project	100% Covered by 6 RSSs, of which 2 RSSs (Undan, Piai) are supported by this project
Indicator 3 [For MPF] Means of night vision and distance measurement at night (for Northern and Southern Regions)	None for total 47 small patrol boats	40 sets each of night vision goggles and binocular range finders for total 47 small patrol boats	[Data was not available]	40 sets of night vision goggles and 29 sets of binocular range finders are ready for use for total 40 small patrol boats ⁽¹⁾
Indicator 4 [For MPF] Capacity of secret communications using MPF radio network (for Northern and Southern Regions)	No digital portable radio for total 18 bases (Northern 8; Southern 10) and 47 small patrol boats	60 sets of digital portable radio for 18 bases (at least 1 at each base) and 47 small patrol boats	60 sets of ready-to-use digital portable radio for total 15 bases (Northern 7; Southern 8) ⁽²⁾ and 40 small patrol boats	60 sets of ready-to-use digital portable radio for total 15 bases (Northern 7; Southern 8) and 40 small patrol boats
Indicator 5 [For MPF] Operation of RHIBs (capacity of actions against high speed illegal boats)	0 boat can chase high speed illegal boats (<50 knots)	4 boats can chase high speed illegal boats (<50 knots)	All of the 4 RHIBs having ability to chase high speed illegal boats	All of the 4 RHIB having ability to chase high speed illegal boats

Notes: (1) The number of small patrol boats decreased from 47 in 2007 as old boats were disposed. (2) The number of bases decreased compared to 2007 as 1 base in Northern region and 2 bases in Southern region were closed.

Sources: MMEA and MPF

3 Efficiency

Both the project cost and project period are within the plan (ratio against the plan: 93% and 98%, respectively). The outputs of the project were produced mostly as planned. Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the equipment procured by the project have been carried out by MMEA and MPF,

strategic hot spot in the Straits of Malacca. This move was found necessary by MMEA in order to monitor the sea more effectively at the hot spots, while repairing the other laser camera which was procured by MMEA.

⁴ According to MPF, 4 or 5 binocular range finders are allocated to each base and used effectively for night patrol. 1 or 2 binocular range finders have been kept as spare. Although the number of boats for night patrol is different depending on the security situation, the current 29 sets of useable binocular range finders are enough to conduct appropriate night patrol. MPF has decided to make a contract for repairing binocular range finders in bulks rather than in separate to reduce the whole repairing costs and contract arrangements. MPF has received necessary budget for repairing and is now under preparation of contract arrangements.

the implementing agency or its' subordinate, respectively.

MMEA's role sustained as what was considered desirable at the time of ex-ante evaluation with appropriate number of staff being allocated. MPF's role in terms of patrol has expanded to Malaysia Territorial waters after July 2014. Previously, it was limited only to riverine, islands, harbors, lakes and beaches. Due to the invasion by the Sulu Army from the Southern Philippines to the east coastal area of Sabah in February 2013, the government has changed the policy to further strengthen security and safety. To meet these new needs, by the end of 2015, at least 1000 new personnel will be recruited and additional 5 more speed boats will be purchased by MPF. The budget has been allocated for these purposes and the new recruitment/purchase will be carried out.

For the technical aspect, MMEA has no problem in operating and maintaining of MSSS, to which all the equipment procured under this project were incorporated. Also, MMEA continuously provides technical training for MSSS in each subject every year in order to keep the level of competency. In parallel, over the last 10 years JICA and MMEA has conducted technical cooperation projects⁵ which has contributed maritime enforcement and maritime safety in Malacca Straits. As for MPF, there is no problem in its technical level in using operation of project equipment and in maintenance by private shipyard or MPF workshops, and MPF keeps the technical level of staff in operation of project equipment.

In the financial aspect, the budget secured for maintenance of the equipment for MMEA (89,100 ringgit for the past three years) is lower than the planned amount; however, both MMEA and MPF have allocated enough budget to repair the equipment.

As for the current status of operation and maintenance, most of the procured boats and equipment are in good condition except a few equipment mentioned in "2 Effectiveness/Impact" above. At MMEA, all MSSS equipment (including those procured by this project) receive periodic inspections, checks, measurements and other routine maintenance as well as predictive maintenance from the vendors on the contract basis. The vendor provides all logistical requirements, critical spares, fast-moving spares and consumables, which are required to operate, maintain, inspect and service each system to the optimum level, for the entire duration of the contract period at the vendor cost.⁶ On MPF, repair of equipment (see "2 Effectiveness/Impact") is reported to be carried out within 2015.⁷

Therefore, in terms of structural, technical and financial aspects and the current status of operation and maintenance, sustainability of this project effect is high.

5 Summary of the Evaluation

The project has mostly achieved its objectives of enhancing the capacity of MMEA and MPF in maritime surveillance, patrol, communications and control. The indicators designated in ex-ante evaluation such as full coverage of sea area under visual and radio monitoring (MMEA) and capacity for night patrol, secret communications and chase of high speed illegal boats (MPF) were achieved. The equipment are all well managed and mostly utilized. As for sustainability, no particular problems have been observed in the structural, technical and financial aspects of the implementing agencies as well as the current status of operation and maintenance.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency: None

Lessons learned for JICA:

- Although the models of the equipment were recommended by Malaysian side, it is suggested to carefully determine specifications which can be easily maintained and repaired in Malaysia upon the completion of the project.

Number of arrests against illegal boats in the Strait of Malacca

Source: MMEA

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014 (as of May)
number of Inspection cases	360	4,497	7,396	13,598	19,556	21,271	26,792	27,474	4,059
number of Arrest cases	173	691	697	1,037	1,336	898	813	688	116

⁵ The said projects are namely 'Improvement of Ability in Maritime Safety & Security in Malaysia' (2005~2009), 'Human Resource Development in the Capacity Building in Maritime Safety & Security' (2009~2013) and on ongoing project 'Enhancing Capacity for Maritime Safety & Security & developing Education & Training Program' (2013~2016).

⁶ When the questionnaire survey was conducted in September 2014, the contract period was valid until October 2014. However, the contract has been renewed for another 3 years.

⁷ Based on the feedback of the questionnaire survey obtained from MPF.



Digital Potable Radio



The current situation of the RDF at RSS Undan, MMEA