

評価調査結果要約表（英文）

1. Outline of the Project	
Country : Republic of Palau	Project : The Project for Improvement of Solid Waste Management
Issue/Sector : Environmental Management	Cooperation scheme : Technical Cooperation Project
Division in charge : Global Environmental Dept. Environmental Management Group	Total cost : 293million (yen)
Period of Cooperation : October, 2005 – October, 2008	Partner Country's Implementing Organization : Ministry of Resource and Development(MoRD) Koror State Government(KSG)
	Supporting Organization in Japan : Ministry of Environment
<p>1-1. Background of the Project</p> <p>Solid waste generation in Palau has been increasing in recent years due to economic and social development. Various commodities and goods, which have to be imported from other countries such as the United States of America and developed Asian countries, are required to satisfy the needs of the present lifestyle in Palau. As a result, the amount of waste has grown rapidly and the types of waste have become more diverse. Sufficient attention has not been paid to the issue of solid waste management to date, despite recognition of the need to cope with the issue. All waste has been dumped into landfill sites without proper management, thus the existing landfills in every state have caused impact on the environment and unsanitary conditions. Especially in Koror state, the M-dock landfill site located in the capital, Koror, has been operated for several decades with insufficient safeguards. As the landfill is close to populated areas, residents complain about its undesirable condition. Its poor condition may have a negative influence on tourism, an important industry for the Palau economy. In addition to the improper operation of the landfill, its coming expiry is of great concern because a new site for final disposal has been difficult to secure.</p> <p>In these circumstances, the Government of Palau requested the Government of Japan to provide technical cooperation to rehabilitate the M-dock landfill site. As a result of Ex-ante Evaluation Study, the Records of Discussion (R/D) was signed between both countries on May 19, 2005.</p> <p>“The Project for Improvement of Solid Waste Management” was started from October, 2005 for three years in order to improve the capacity of solid waste management in Palau with MoRD and KSG.</p>	

1-2. Project Overview

(1) Overall Goal

Successful experiences of Koror State are maintained and disseminated to other states in the Republic of Palau.

(2) Project Purpose

Capacity of solid waste management of the national government and Koror State is increased.

(3) Outputs

- 1) A national solid waste management plan to reduce the volume of waste disposal is developed.
- 2) Existing waste disposal practices are improved to reduce environmental and health risks in Koror State.
- 3) Personnel of the concerned agencies for Solid Waste Management in Palau are trained.

(4) Inputs

Japanese side :

Expert : 48.93M/M(Including contract works in Japan)

Equipment and Machinery : 110,167.09 US\$

Third country training course : 6 personnel

(Samoa: 3 personnel(1 personnel: Training cost was born by SPREP), Philippines: 3 personnel)

Palauan Side :

Counterpart :13 personnel in total (Terminal Evaluation time: 9 personnel)

Land and Facilities, M-dock landfill site, venues for workshops, meeting room etc.

Local cost : Approximately 257,429 US\$

2. Evaluation Team

Members of Evaluation Team	Leader: Mr. Shiro Amano (Senior Advisor, Institute for International Cooperation, JICA) Cooperation Planning: Mr. Hiromichi Kano (Project Officer, Environmental Management Division I Environmental Management Group Global Environment Dept., JICA) Evaluation and analysis: Ms. Satomi Tanaka (Consultant, CDC International Corporation)
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Period of Evaluation	22/June/2008-5/July/2008	Type of Evaluation : Terminal
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3. Results of Evaluation

3-1. Achievement of the Project

Inputs from Japanese side and Palauan side were mostly provided in line with plan of R/D and PDM except some delay. As for achievement of outputs, output 1 was achieved and the draft National Solid Management Plan (NSWMP) was drafted. Indicators of output 2 and 3 were mostly achieved. As for

the indicator 2-3 of output 2, instructions of the reachate pipe system is not completed because of the delay of rehabilitation works for the M-dock landfill site.

The Project Purpose of the Project was mostly achieved at the terminal evaluation time. As for the Capacity Evaluation Indicator, Institutional and Social level was 79%, Organizational level was 74% and Individual level was 87%.

The Overall Goal of the Project is likely to be achieved within three to five years, if Government of Palau issue the NSWMP properly, the Koror State Government (KSG) continue its effort to keep up with proper operation on solid waste management and the Ministry of Resource and Development (MoRD) continues to carry out its mandate to enforce NSWMP and assist in state government.

3-2. Summary of Evaluation Results

(1) Summary of Evaluation Results

1) Relevance

The relevance of the Project is high as following reasons.

The Project Purpose and the Overall Goal still consistent with “National Development Plan 2020” and the initiatives of Island Summit (PALM).

The Project approach such as development of a national strategy, landfill rehabilitation and capacity development of personnel consistent with the needs of solid waste management in Palau.

In addition, Environmental issue is one of the important assistant issues in “JICA Country Program”.

2) Effectiveness

Effectiveness of the Project is high as following reasons.

- Degree of achievement of the Project Purpose

The Project Purpose of the Project was mostly achieved at the terminal evaluation time. As for the Capacity Evaluation Indicator, Institutional and Social level was 79%, Organizational level was 74% and Individual level was 87%.

- Contribution of Outputs to the Project Purpose

Every output is related to each other and is designed to contribute to the achievement of the Project Purpose.

- Promoting factors to achieve the Project Purpose : Training programs in third country, awareness of stakeholders and supports and understandings of MoRD and KSG to the Project.

- Impeding factors to achieve the Project Purpose: Heavy rain, delays in supply of materials from Palau side, SAMLO’s scrap collection activities and mechanical failures of the provided pumps for leachate treatment.

3) Efficiency

Efficiency of the Project is relatively high as following reasons.

Inputs

Japanese side

As for the dispatch of experts, its timing, duration, number, quality, and specialty are mostly appropriate. Provisions of the equipment and materials are also mostly appropriate in terms of quality, timing, quantity and utilization except for the provided pumps for leachate circulation. In general, however, they have contributed to generation the planned Outputs.

Palauan Side

As for the assignment of counterpart personnel, its timing and technical level are mostly appropriate and the degree of the contribution to the achievement of Outputs is relatively high. On the other hand, almost all counterparts are full-time staff of the government offices so that their participation in the Project activities was sometimes limited. In addition, disbursement of budget from time to time was slow due to financial difficulty.

4) Impact

- Expectation to the achievement of the Overall Goal

The Overall Goal of the Project is likely to be achieved within three to five years, if Government of Palau issue the NSWMP properly, the Koror State Government (KSG) continue its effort to keep up with proper operation on solid waste management and the Ministry of Resource and Development (MoRD) continues to carry out its mandate to enforce NSWMP and assist in state government.

Positive impacts: Positive impacts of around M-dock landfill, Policy and action on Solid Waste

Management of the Government of Palau and Public Education and Enhancement on Solid Waste Management were observed.

- Negative impacts : Not particularly observed.

5) Sustainability

Sustainability of the Project is moderate under the condition of proper execution of the NSWMP.

- Policy and organizational aspects

① The MoRD is screening a new landfill construction plan in Aimeliik State.

② The KSG Recycling Project is under implementation.

③ Staffs at SWMO-BPW, MoRD and SWMO-KSG were increased.

- Financial aspect

① The separate budget account for SWMO-BPW was established.

② The Landfill Operation Fund was established.

③ The recycle program law was enacted.

- Technical aspect

① Techniques were transferred in the M-dock landfill site and the pilot project in Ngarchelong State

② The 3R activities, T/C and PEEC will be continued by the Palauan side.

- Environmental and social aspect

Environmental monitoring will be continued by EQPB together with MoRD.

(2) Conclusion

The following major achievements of the Project are observed by the time of Terminal Evaluation:

- The Project has successfully formulated the draft NSWMP as a long-term guiding principle of Palau's solid waste management.
- Improper waste disposal practice at the M-dock landfill in Koror State has been significantly improved and the process to develop a new landfill has also been demonstrated as a model for future planning and implementation for other states.

It is the Team's firm belief that the Project has been progressing relatively well and the Project Purpose will be achieved with continued efforts of the people concerned to fully secure its sustainability.

In conclusion, the Team therefore suggests that the Project be terminated as planned.

(3) Recommendation

- Continuous implementation of T/C and PEEC
- Proper implementation of the NSWMP
- Urgent planning of a new landfill in place of the M-dock landfill site
- Implementation of workshops on solid waste management regularly and dissemination of the experiences of Project to other states

(4) Lessons learned

- PEE activities are a key to successful waste management for small islands.
- Rehabilitation of open dumps makes people's grappling with solid waste management change.
- An appropriate technology can sustain the operation of landfill
- Consideration to social aspect is important in solid waste management.
- Solid Waste Management is a never-ending challenge/opportunity.