

Country Name	<b>The Project for Improvement of Medium Wave Radio Broadcasting Network and Disaster Prevention</b>		
Tuvalu			

**I. Project Outline**

Background	In Tuvalu, the medium wave (MW) radio broadcasting service operated by the Tuvalu Media Department (TMD) was the sole communication tool to provide vital information, including information about disasters, for the people of the country inhabiting in the atoll islands scattered over a vast expanse of the South Pacific Ocean. Since the broadcasting service by TMD had been suspended due to the breakdown of the transmitter by a fire and the collapse of the antenna tower, TMD developed an alternative satellite-based FM (Frequency Modulation) broadcasting network stationed in Funafuti with a FM relay transmitter on each atoll island. However, the unstable operation of the system caused frequent suspensions of the broadcasting service. Under such situation, the government of Tuvalu requested the government of Japan to support improvement of the MW radio broadcasting system.				
Objectives of the Project	To provide reliable information stably to the people in the country including the atoll islands through MW radio broadcasting service by construction of a new radio station building and installation of broadcasting equipment in Funafuti, thereby stably reduction of information gap in the remote atoll islands.				
Outputs of the Project	<ol style="list-style-type: none"> <li>Project Site: Funafuti</li> <li>Japanese side: Provision of grant fund for construction of a radio station building and installation of MW antenna system, MW transmitter, Power Supply Equipment and Air conditioning for Transmitter, , Master Control System, ON AIR Studio System, Production Studio System, Editing System, Equipment for News Gathering, Maintenance Equipment and Tools, Spare Parts and Consumable Parts.</li> <li>Tuvalu side: Land preparation including removal of obstacles and weeds, securing power supply and telephone lines, installation of fence and gates</li> </ol>				
Ex-Ante Evaluation	2009	E/N Date	June 16, 2010	Completion Date	November 4, 2011
Project Cost	E/N Grant Limit: 801 million yen, Actual Grant Amount: 799 million yen				
Implementing Agency	Office of the Prime Minister				
Contracted Agencies	Yachiyo Engineering Co., Ltd., Dai Nippon Construction, NBK Corporation				

**II. Result of the Evaluation****<Special Perspectives to be Considered in the Ex-post Evaluation>**

[Logics of the project objectives]

In the ex-ante evaluation summary, the project objectives mention that the project will contribute to improvement of disaster prevention capacity for natural disaster through reduction of information gap in the remote islands. However, the Preparatory Survey Report compiling at the time of project planning, mentioned the two indirect effects of “mitigation of damage by natural disaster” “educational effect.” Therefore, in this ex-post evaluation, achievement of project objective is verified by stable provision of MW radio broadcasting service, and contribution to improvement of disaster prevention capacity is verified as one of the expected positive impact through reliable information transmission including disaster information, health and education by MW radio broadcasting service.

[Indicator and its target of the expected quantitative effect defined in the ex-ante evaluation summary]

In the ex-ante evaluation summary, the indicator is defined as “the number of islands to receive MW radio broadcasting service” and its target is “All the 8 remote islands can stably receive MW radio broadcasting service”. However, the definition of “islands to receive MW radio broadcasting service” is unclear.

**<Constraints on ex-post evaluation>**

Before starting the field survey, the JICA Fiji Office visited Tuvalu and checked feasibility of data collections, in particular, data collection about the beneficiaries in the 8 atoll islands. As a result, the data and information about the beneficiaries was collected alternatively from the sample beneficiaries visiting Funafuti from the 8 atoll islands or living in Funafuti who have families in the 8 atoll islands. The major constraints identified are as follows:

- Limited access to the 8 atoll islands: Accessibility to the 8 atoll Islands from Funafuti is just limited because the vessel visits those remote islands once a month. Therefore, it is difficult for the JICA office to visit those islands in good timing for ex-post evaluation.
- Limited communication infrastructure: Also, it was difficult to collect information through questionnaire survey using e-mail nor telephone interviews due to the limited coverage of information and communication infrastructure in those atoll islands.
- Organizational weakness of the implementing agency: In addition, since the limited number of staff and the limited capacity of the implementing agency (the Office of Prime Minister), it was also difficult for the implementing agency to collect data and information about the beneficiaries as well.
- Difficulty of procuring local consultant for data collection: Although the JICA Fiji Office tried to procure local consultant to collect necessary data and information from beneficiaries in the 8 atoll islands, no local consultant who could conduct data collection was available in Tuvalu and no local consultant in Fiji was not able to carry out data collection in Tuvalu.

**1 Relevance****Consistency with Tuvalu’s development policy at the time of ex-ante evaluation and ex-post evaluation**

This project has been highly consistent with Tuvalu’s development policy as “distant atoll development and basic infrastructure development including communication” is set in policy documents such as the Vision 2015 (1998-2015) and the National Strategy for Sustainable Development (2005-2015).

**Consistency with Tuvalu's development needs at the time of ex-ante evaluation and ex-post evaluation**

The project has met Tuvalu's development needs for stable radio broadcasting service for 8 remote atoll islands including programs on health, education and disaster information.

**Consistency with Japan's ODA policy at the time of ex-ante evaluation**

The project was consistent with Japan's ODA policy for Tuvalu and the 5<sup>th</sup> Pacific Islands Leaders Meeting (PALM 5) Islander's Hokkaido Declaration prioritizing support for infrastructure development at the time of ex-ante evaluation.

**Evaluation result**

In light of the above, relevance of this project is high.

**2 Effectiveness/Impact****Effectiveness**

The project has partially achieved its objective of "provision of reliable information stably to the people in the country including the atoll islands through MW radio broadcasting service" despite of no data available on the number of households receiving MW radio broadcasting services in the 8 atoll islands. Most of major equipment installed by the project, such as the main control system, on-air studio system, editing system, have been in use for radio broadcasting service of 9 hours a day. According to the interviews with the persons living in Funafuti who are from the 8 target atolls and persons visiting from the target atolls except for Nui, they can receive MW radio broadcasting services in the islands where they inhabit. While no disruption of radio broadcasting services has been for regular maintenance, the radio broadcasting services were disrupted for 1 month in 2011 by transmitter problem and 2 days in 2012 due to electric problem. Since 2013, no interruption of radio broadcasting services has been caused by any accident.

**Impact**

The project contributed to reduction of information gap in the 8 atoll islands as expected. The 8 atoll islands are able to receive the news and information about the major activities held in Funafuti through the radio broadcasting services. The Tuvalu Broadcasting Corporation, which is former TMD, has provided programs of education, health, news and weather forecast as well as religions. Also, during cyclone, disaster related information is provided for 24 hours by the radio broadcasting services. In addition, as warnings were on-aired, the people took precautions about higher sea levels and received information about updated situation as well as advices to mitigate damages by disaster such as cyclone by 24 hours on-air program. The communication in Tuvalu between mainland Funafuti and other atoll islands have been easier and the people in the remote atoll islands can have easier life with more information through the radio programs broadcasted by TVBC. No negative impacts on natural environment were observed.

**Evaluation result**

In light of the above, effectiveness and impact of the project are fair.

**Quantitative Effects**

Indicator	Before the project (2010) Baseline	Plan (2014) Target Value	Actual (2011)	Actual (2012)	Actual (2013)	Actual (2014) Target Year	Actual (2015) Ex-post Evaluation
Indicator 1: No. of atoll islands receiving radio broadcasting services by TMD*	6 but unstable	8** stable	8***	8***	8***	8***	8***

Source : Preparatory Study Report, p.3-2, Data provided by TMD, data by interview survey with 28 valid respondents.

Note 1: \*The number of atoll islands with public offices receiving MW radio broadcasting services by TMD. TMD was corporatized in January 2015 and became Tuvalu Broadcasting Corporation (TVBC).

Note 2: \*\*The target 8 atoll islands are as follows: Nanumea, Nanumaga, Niutao, Nui, Nukufetau, Vaitupu, Nukulaelae, and Niulakita.

Note 3: \*\*\*The data was based on the interview surveys with respondents from the 7 atoll islands except for Nui and Funafuti.

**3 Efficiency**

The project cost and period were within the plan (ratio against the plan: 100%, 96%, respectively.) Therefore, efficiency of this project is high.

**4 Sustainability****Institutional aspect**

As mentioned above, TMD was corporatized in January, 2015 and transformed to TVBC. They are currently reconstructing the structure and the Prime Minister's Office will nominate the board members to look after operation and maintenance of TVBC. Currently, 19 staff works for TVBC for operation and maintenance of radio broadcasting facilities, 2 technicians are deployed under supervision of the chief engineer. 5 staffs are deployed for the Production Unit and 3 staffs are deployed for the Press Unit. Although the number of staff of TVBC is sufficient for the radio broadcasting services, TVBC plans to hire more staff once the board members are elected. However, since the restructuring of TVBC has been under implementation, the future perspectives, including how this new organizational arrangement affects O&M of radio broadcasting facilities, is still unclear.

**Technical Aspect**

For the operation and maintenance, one of the technicians has been sent on study to upgrade his skills and knowledge. Further training for technicians will be added in order to optimize the use of state of art digital equipment. The staffs of the Production Unit are able to utilize the production equipment, including the editing room. The press staffs together with the technical staffs are also capable enough to use the equipment efficiently. Despite of no regular training for the staff, the manuals provided by the project have been properly used by the Chief Engineer.

**Financial Aspect**

The major source of TVBC is the government subsidy. In 2014, while the sales revenue from broadcasting, advertisement and so on was 45,810 A\$ (Australian dollars), the government subsidy was 414,090 A\$ which covered the expenditure of 397,850 A\$ including the maintenance cost of 16,240 A\$. However, the budget for procurement of necessary spare parts has not been clearly allocated. The financial balance of TVBC has been stable by the government subsidy.

### Current Status of O&M

As mentioned above, most of the equipment installed by the project except the production studio system has been in good conditions. The reason why the production studio system has not been in use is breakdown of central cooling system. However, the quotation has been sought from a Japanese manufacturer. Then once parts are purchased and restored, the system can be used again soon. For these equipment, daily inspection and regular maintenance have been conducted by the Chief Engineer. In terms of spare parts, although a part of them have been used and some of them are still available so far, there are concerns about procurement of them as most of the equipment and spare parts were procured in Japan and they are not available in Tuvalu and other neighboring countries.

### Evaluation result

In light of the above, there are some problems observed in financial aspect and current status of O&M. Therefore, sustainability of project effects is fair.

### 5 Summary of the Evaluation

The project has partially achieved its objective, “to provide reliable information stably to the people in the country including the atoll islands through MW radio broadcasting service”. Also, the project contributed to reduction of information gap in the atoll islands and mitigation of damages by natural disaster including cyclone through the radio broadcasting services by TVBC.

As for sustainability, the expenditure of TVBC has been covered by the government subsidy.

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

## III. Recommendations & Lessons Learned

### Recommendations to implementing agency:

#### [For TVBC]

It is recommended that causes of breakdowns of equipment's be found out by TVBC 's technicians and prompt purchase of necessary spare parts installed. In order to secure budget for spare parts, it is necessary to consider allocation of such budget in their annual budget. In addition, if there is any equipment that cannot be repaired by their existing resources, it is desirable to consider utilizing outside resources such as manufacturers and experts from abroad as there is hardly anyone available in the region. Capacity building of technicians is very important so that they can manage problems and rectify it. Continuous training and exposure will be required for technicians.

#### Lessons learned for JICA:

[Consideration of local procurement of equipment and local availability of spare parts for ensuring sustainability]

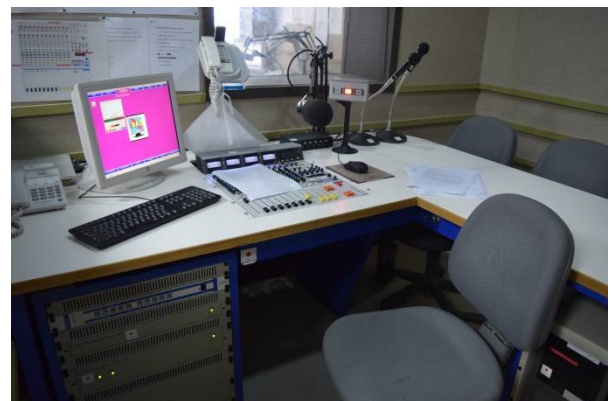
Since the most of equipment installed by the project were procured in Japan, there are concerns about procurement of spare parts for them which are not available in Tuvalu and other neighboring countries. Broadcasting equipment is usually high-spec and it is general that relevant equipment and spare parts are procured from developed countries like Japan, however, in order to ensure sustainability of equipment provided by grant aid project, it is essential to carefully consider possibility of local procurement of equipment and spare parts. If equipment is high-spec and impossible to procure locally, considering feasibility of procurement from neighboring countries and checking procurement route would be recommended at the time of project planning or outline design study.

[Evaluation design and constraints on data collection]

Geographically, it is very difficult to collect necessary data and information for the evaluation in Tuvalu, as all 8 atoll islands are scattered and the transportation is very limited. There is no regular ship to go to atoll islands, approximately once in a month. Since collecting necessary information (e.g. number of households receiving radio broadcasting and so on) from all atoll islands is almost impossible in Tuvalu, this should have been taken consideration and alternative way (for example, hiring local consultant for data collection) could be considered at the time of ex-ante evaluation for the project like this.



Technician room and equipment provided by the project



On-air studio room installed by the project