

Appendix-6

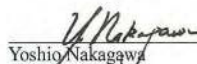
MM of TWG

MINUTES OF MEETING
OF
FIRST TECHNICAL WORKING GROUP MEETING
FOR
THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI

Nadi, 4 February, 2015



Colin Simmons
Chairman,
Technical Working Group



Yoshio Nakagawa
Team Leader,
JICA Study Team

The 1st Technical Working Group (hereinafter referred to as "TWG") was held on February 4, 2015 in Nadi Town Council Chambers based on the decision of Inception Report Meeting held between MOA and JICA Study Team on August 22, 2014, and Joint Coordination Committee (hereinafter referred to as "JCC") held on September 2, 2014.

The list of attendance of this meeting is attached as Appendix-1. The Terms of Reference and member list of JCC and TWG are as shown from Appendix-2 to Appendix-5. The meeting was opened by the Commissioner Western Division.

The main items which were discussed and understood among attendees are summarized as follows:

1. Mr. Colin Simmons, Director of Land and Water Resources Management of MOA, was selected as Chairman of TWG and Mr. Robin Ali, Special Administrator of Nadi Town Council, was selected as Deputy Chairman of TWG.
2. The Chairman briefed the TWG on the background of the Project for the planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") and the establishment of the Joint Coordinating Committee and Technical Working Group to assist the Ministry of Agriculture in the implementation of the Project. The TWG were informed of the Terms of Reference that will guide JCC in its role and purpose.
3. The JICA Study Team made presentations of the progress of the Study, and the contents were discussed by the TWG. The presentation was composed of the following 5 sessions.
 - Session 1 Background and Progress of the Study
 - Session 2 Technical Report (Initial Findings)
 - Session 3 Technical Topics (1), Rainfall and Runoff Analysis
 - Session 4 Technical Topics (2), River Flow Measurements
 - Session 5 Technical Topics (3), Flood Control and Land Issues
4. The additional data and information related to Facility Design/Construction Planning/Cost Estimation and Institutional, Legal System Analysis was requested by the JICA Study Team to the related authorities of TWG.
5. The former Chairman of the Nadi Basin Catchment Committee Mr Brian Watson, person who are invited by TWG member, commented on the issue of the bypass road project that the land acquisition and compensation can take 2 or 3 years. This negotiation period shall be taken note of by the Project.
6. The Meteorological Department of Fiji Meteorological Services confirmed that they will continue to work with TWG and the JICA Study Team in providing data and information regarding rainfall and water level measurement if any additional when requested.
7. Regarding the concept of river zone, the River and Stream Act [Cap 136] stipulates the width of ordinary water line in wet season and the highest spring tide plus 20 feet on both banks for access purposes only. In the Study, the various types of flood control measures such as river improvement, retarding basin, dam reservoir, and diversion channel might be planned. In that case, it is expected that the required area for flood control measures based on engineering aspects proposed by the JICA Study Team will take this into consideration.



8. Some example of easement in Japan was presented by the JICA Study Team. Such ideas are new concepts for Fiji; therefore, the JICA Study Team, MOA and related organizations will discuss and propose applicable ideas in Fiji.
9. The JICA Study Team presented findings of the proposed Fiji Plaza development plan. The District Officer Nadi agreed to confirm the current status and report back to TWG. At second JCC, initial results of main flood control measures shall be discussed and this matter shall be reported.
10. Regarding issues discussed at the TWG, all attendees advised to report it to their supervisors and JCC member of their respective organizations.
11. The Commissioner Western Division emphasized on the importance of collaborating and providing data and information with TWG members and other various stakeholders, and assisting the JICA Study Team in delivering their services.
12. The Chairman in closing thanked the members of the TWG on behalf of the Minister for Agriculture and looked forward to their continued support and co-operation to the JICA Study Team.

List of Attendance

| Name | Position |
|---|--|
| Fiji Side | |
| Ministry of Agriculture | |
| Colin Simmons | Director of Land & Water Resource Management |
| Vinesh Kumar | Senior Agriculture Officer |
| Khin Maung Cho | Principal Engineer (RE), LWRM |
| Reama Naco | Agriculture Officer |
| Marau Vuli | Agriculture Officer |
| Shiri Narayan | LWRM Office, Ba |
| Apisai Yaranamua | Landuse Unit |
| Joeli Waradi | Landuse Unit |
| Ministry of Fisheries and Forests | |
| Uraia Racule | Forestry Officer |
| Ministry of Works, Transport and Public Utilities | |
| George Tavo | Divisional Engineer Works (W) |
| Aminiasi Tuidraki | Acting Director Fiji Meteorology Services |
| Paula Tawakece | Technical Officer 1, Hydrology Section |
| Ministry of Local Government, Urban Development, Housing and Environment | |
| Senivasa Waqairamasi | Senior Environment Officer West |
| Ministry of Lands and Mineral Resource Lands Department | |
| Malakai Vakautawale | Principal Technical Officer |
| Meizyanne Hicks | Principal Technical Officer |
| Vakawale Waqawai | |
| Jone Draunibaka | |
| Ministry of Rural and Maritime Safety and Natural Disaster Management | |
| Manasa Tagicakibau | Divisional Commissioner Western |
| Sitiveni Tavaga | Divisional Planning Officer (Western) |
| Kaie Nawasa | Acting EO Planning CWD Office, Lika |
| Jiuta Waqavonovono | District Officer Nadi |
| Ministry of Strategic Planning, National Development and Statistics | |
| Epeli Waqavonovono | Principal Economic Officer |
| Ministry of Finance | |
| Sanjay Kumar | |
| iTaukei Land Trust Board | |
| Pauliasi Daunivalu | |
| Water Authority of Fiji | |
| Seremaia Koroi | WRMU |
| Nadi Chamber of Commerce | |
| Robin K. Ali | Nadi Town Council - Special Administrator |
| Robin Anganu | Nadi Town Council - Chief Executive Officer |
| Balwant Chandra | Board Member |
| Sunny Chand | Board Member |
| Japan Side | |
| JICA Fiji Office | |
| Shigeki Ishigaki | Project Formulation Advisor |
| JICA Study Team | |
| Yoshio Nakagawa | Team Leader / Flood Management |
| Takashi Toyoda | Deputy Team Leader / Flood Management |
| Makoto Yonekura | Hydrological Analysis / Runoff Analysis |
| Hajime Watanabe | Environmental and Social Consideration |
| JICA Study Team Local Staff | |
| Ashok Kumar | Assistant Engineer |
| Metuisela Mua | JICA Facilitator |
| Amelina Vualiku | Secretary/Office Assistant |
| Regional Organization | |
| SPC/SOPAC | |
| Litea Biukoto | Disaster Management Advisor - SOPAC |

**Terms of Reference (TOR)
Joint Coordination Committee (JCC)**

The Government of Fiji has accepted Technical Assistance for the implementation of the Project for the Planning of the Nadi River Flood Control Structures in The Republic of Fiji. The Ministry of Agriculture is the Implementing Agency. The Joint Coordination Committee (hereinafter referred to as "JCC") is established in order to facilitate inter-organizational coordination, deliberate and make decisions on the project findings and results.

1. Role of the Joint Coordination Committee [JCC]

The role of the Joint Coordination Committee is as follows;

- Provides direction, guidance and decision making to support the successful delivery of the project
- Assist with resolving strategic level issues and risks.
- Use influence and authority to assist the project in achieving its outcomes.
- To make decisions on formal acceptance of the project deliverables
- Provide update to Cabinet on the progress of the Project through the Implementing Agency

2. Responsibilities of Joint Coordination Committee Members

- Understand the goals, objectives, and desired outcomes of the project.
- Understand and represent the interests of project stakeholders.
- Take a genuine interest in the project's outcomes and overall success.

3. Membership of the Joint Coordination Committee

- The membership of the JCC shall comprise of key government agencies and stakeholders based on their specialist knowledge, ability to represent the interests of stakeholders, and ability to assess the strategic implications and outcomes of initiatives being pursued through the project results and outputs.
- Officers holding the positions of Permanent Secretary, Director and Principal Officer level, Chief Executive Officer or equivalent is desirable. Participation of substitutions appointed by the members is also acceptable.

4. Frequency of Meetings

- The JCC will be held at the beginning of the project, at the end of each stage of the project deliverables and whenever it deems necessary to address emerging issues.

**Terms of Reference (TOR)
Technical Working Group (TWG)**

The Technical Working Group was formed by the Joint Coordination Committee for the implementation of the Project for the Planning of the Nadi River Flood Control Structures in The Republic of Fiji. The Ministry of Agriculture is the Implementing Agency. The Technical Working Group (hereinafter referred to as "TWG") is established in order to facilitate inter-organizational coordination, to address technical issues to support decisions on the project findings and results.

1. Purpose

The purpose of the Technical Working Group is to coordinate the analysis of technical factors related to the project outputs and deliverables. The working group's input on technical issues will contribute to the key consideration and decision to be made in the Joint Coordination Committee's overall assessment of the findings and results of the Project.

2. Role

The role of the Technical Working Group is as follows;

- Review and provide input and feedback on technical reports and other documents provided to the Working Group
- Assist with resolving technical issues and risks.
- To analyze and make decisions on the project findings and results
- Use influence and authority to assist the project in achieving its outcomes.
- Report on the project findings and results to their respective agencies and stakeholders

3. Responsibilities of Members

- Understand the goals, objectives, and desired outcomes of the project.
- Take a genuine interest in the project's outcomes and overall success.
- Commit to work with the JICA Study Team and able to assure continuous collaboration

4. Membership of the Technical Working Group

- The membership of the TWG shall comprise of senior technical official and experts in key government agencies and stakeholders based on their specialist knowledge, and ability to assess the technical issues to support outcomes of the initiatives being pursued through the project results and outputs.
- Technical Officers holding the positions of Principal, Senior Officer level, or equivalent is desirable. Participation of substitutions appointed by the members is also acceptable.
- The composition of the working group may vary over time based on the issues being examined. Experts may be invited to participate as an on-going basis on the working group or contribute on an ad hoc basis.

5. Frequency of Meetings

The 1WG will be held when technical discussion is required at each stage (1 or 2 times at each stage) and whenever it deems it necessary to address emerging technical issues.

List of Members of Joint Coordination Committee (JCC)

1. Fiji side

- Permanent Secretary for Foreign Affairs and International Co-operation
- Permanent Secretary for Agriculture
- Permanent Secretary for Fisheries and Forests
- Permanent Secretary for Works, Transport and Public Utilities
- Permanent Secretary for Local Government, Urban Development, Housing and Environment
- Permanent Secretary for Lands and Mineral Resources
- Permanent Secretary for Rural and Maritime Safety and Natural Disaster Management
- Permanent Secretary for Finance
- Permanent Secretary for Strategic Planning, National Development and Statistics
- Permanent Secretary for iTaukei Affairs
- Commissioner Western Office
- General Manager, iTaukei Land Trust Board (TLTB)
- Chief Executive Officer, Water Authority of Fiji (WAF)
- Director, Fiji Meteorological Services (FMS)
- Chief Executive Officer, Fiji Road Authority
- Special Administrator Nadi Town Council
- Nadi Chamber of Commerce

2. Japanese side

- JICA Fiji Office
- JICA Study Team of the Project
- Other Personnel concerned to be proposed by JICA

3. Regional Organization

- Director SPC/SOPAC

List of Members of Technical Working Group (TWG)

1. Fiji Side

- Ministry of Agriculture (MOA)
 - Land and Water Resources Management (LWRM) Division
 - Land Resource Planning and Development (LRPD) Division
- Ministry of Fisheries & Forests (MOFF)
 - Dept. of Fisheries (DOF)
 - Dept. of Forests (DOF)
- Ministry of Works, Transport and Public Utilities (MWTPTU)
 - Dept. of Works (DOW)
 - Water Authority of Fiji (WAF)
 - Fiji Meteorological Services (FMS)
- Ministry of Lands and Mineral Resources (MLMR)
 - Dept. of Lands (DOL)
- Ministry of Local Government, Urban Development, Housing and Environment (MLGUDHE)
 - Dept. of Environment (DOE)
 - Dept. of Local Government
- Ministry of Rural and Maritime Safety and Natural Disaster Management (MRMSNDM)
 - Commissioner Western Office (CWO)
 - National Disaster Management Office (NDMO)
- Ministry of iTaukei Affairs
- iTaukei Land Trust Board (TLTB)
- Ministry of Sugar
- Airport Fiji Limited

2. Japanese Side

- JICA Fiji Office
- JICA Study Team of the Project
- Other Personnel concerned to be proposed by JICA

3. Regional Organization

- SPC/SOPAC

MINUTES OF MEETING

OF

SECOND TECHNICAL WORKING GROUP MEETING

FOR

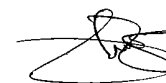
THE PROJECT FOR THE PLANNING OF THE NADI RIVER

FLOOD CONTROL STRUCTURES

IN

THE REPUBLIC OF FIJI

Nadi, 1 September, 2015



Colin Simmons
Chairperson,
Technical Working Group



Takashi TOYODA
Deputy Team Leader,
JICA Study Team

List of Attendance

| Name | Position |
|---|--|
| Fiji Side | |
| Ministry of Agriculture | |
| Colin Simmons | Director of Land & Water Resource Management |
| Khin Maung Cho | Principal Engineer (RE), LWRM |
| Vinesh Kumar | Principal Agriculture Officer West |
| Binesh Prasad | |
| Ateleni V | |
| Monika Bala | |
| Sohela Khan | |
| Ministry of Works, Transport and Public Utilities | |
| George Tavo | Divisional Engineer Works (W) |
| Ministry of Fisheries and Forests | |
| Eroni Talemaikanacea | Department of Fisheries |
| Ministry of Local Government, Urban Development, Housing and Environment | |
| Senivasa Waqairamasi | Department of Environment |
| Viliame Momoivalu | Department of Environment |
| Ministry of Rural & Maritime Development | |
| Kelera Bale | Assistant DO, Nadi, Commissioner Westerns Office |
| Kaic Nawasa | Executive Planning Officer, Commissioner Westerns Office |
| Ministry of Lands | |
| Malakai Vakatauwale | Principal Technical Officer |
| Irene Nayacakalou | Principal Valuer |
| DTCP | |
| Paul A. Seru | |
| iTLTB | |
| Kolinio Mudunavosa | Senior Estate Officer Southwest |
| Fiji Roads Authority | |
| Braeden Lobb | Area Manager, MWH |
| Ministry of Public Enterprises, Communications, Tourism and Civil Aviation | |
| Isei Tudreu | Civil Aviation Authority of Fiji (CAAFI) |
| Developer | |
| John Ross | |
| Nadi Chamber of Commerce | |
| John Grey | Representative of Chamber of Commerce |
| Rachna Dass | |
| Nadi Town Council | |
| Robin Ali | Nadi Town Council - Special Administrator |
| Ratu Meli Naevo | |
| Haroon S. Ali | |
| Roneel Raj | |
| Aruna Chandra | |
| Rajeshwar Raj | |
| Japan Side | |
| JICA Study Team | |
| Takashi Toyoda | Deputy Team Leader / Flood Management |
| Takeshi Watanabe | Project Implementation Planning |
| JICA Study Team local Staff | |
| Metuisela Mua | Facilitator |
| Ashok Kumar | Assistant Engineer |
| Joe Waqavakatoga | Assistant Engineer |
| Amelina Ratubuli | Secretary/Office Assistant |
| Regional Organization | |
| SPC/SOPAC | |
| Rajendra Prasad | |

The 2nd Technical Working Group (hereinafter referred to as "TWG") was held on September 1, 2015 in Nadi Town Council Chambers based on the decision of Inception Report Meeting held between MOA and JICA Study Team on August 22, 2014. The Principal Agriculture Officer Western briefly welcomed the presence of the public and requested the chairperson to say a few words of welcome.

The JICA Study Team made presentations of the progress of the Study, and the contents were discussed by the TWG. The presentation was composed of the following 4 sessions.

Session 1 Progress of the Study

Session 2 Review of the decision of 3rd Joint Coordination Committee (JCC)

Session 3 Basic Concept of the River Widening

Session 4 Process to the implementation of the project

The main items which were discussed among attendees are summarized as follows:

Discussion

Session 1

- In session 1, the progress of the Study was explained by the JICA Study team.
- Mr. Rajendra Prasad (SPC/SOPAC) inquired whether deepening of the Nadi River is considered or not. Mr. Toyoda (JICA Study Team) responded widening of river is the best option selected in the 3rd JCC with the inclusion of the retarding basins and the dam to reduce inundation areas, and deepening of river channel is not considered basically in the plan.
- Mrs. Senivasa Waqairamasi (Department of Environment (DOE)) stated that there are a lot of factors to consider from upstream to downstream of the river in this project. Especially, various applications for logging should be submitted to the forestry department in terms of upstream of the river. There are a lot of projects which are ongoing at the moment in the downstream and they might cause some problems in downstream. Widening of the middle-stream seems good, but we should consider incorporating decision considering the ongoing projects in the upstream and downstream.
- Mr. Vinesh (MOA) highlighted that two bridges included in the projects in terms of widening of the river. Mr. Braeden Lobb (Fiji Road Authority) pointed out that it might require significant government funding for the rebuilding of the two bridges.
- Mrs. Senivasa Waqairamasi (DOE) inquired about the social impact on the residential and industrial areas along both river banks, how are they going to be compensated given the fact that widening of the river is to take place. Mr. Colin (MOA) pointed out that the JICA Study team has also taken that into consideration and is also included in Master Plan and that point will also be considered in the Environment Impact Assessment Report before the implementation of the Project.
- Mr. Rajendra Prasad (SPC/SOPAC) inquired that any decision has been made or it is just a proposal. Mr. Colin (MOA) responded that it's just a proposal and a decision will be formalized after the submission of final report.
- Mr. Robin Ali (Nadi Town Council - Special Administrator) pointed out that the people of Nadi are following closely with all the discussions going on and they are quite anxious to see the project goes

ahead.

Session2

8. In session2, the result of decision of 3rd JCC was explained by the JICA Study team.
9. Mr. John Gray (Nadi Chamber of Commerce) expressed their gratitude on such a comprehensive report and they are eagerly waiting for the date for the projects to start, and thanked everyone for the contribution of ideas and views as well.

Session3

10. In session3, Basic Concept of the River Widening was explained by the JICA Study team.
11. Mr. Colin (MOA) inquired when the JICA Study team will finalize the alignment of the river planning. Mr. Toyoda (JICA Study Team) responded that at the end of October they will submit the masterplan and alignment of the river channel will be finalized through feasibility stage.
12. Mr. Colin (MOA) inquired there are any potential like in Japan for the Chamber of Commerce to utilize the banks of the river after the project for value adding or commercial developments. Mr. Toyoda responded that there are also similar situations in Japan and they sometimes have meetings with town planning section and river planning section on how to utilize the river side, and a collaboration of both river planning and town planning and a collaboration of both authorities are important.

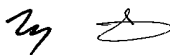
Session4

13. In session4, process to the implementation of the project was explained by the JICA Study team.
14. Mr. Gray (Nadi Chamber of Commerce) thanked the JICA study team for the presentation in terms of a general timeline of a project and he further added if the timeframe of the Project could be shortened.
15. Mr. Viliame (DOE) suggested the JICA study team to have a continuous update of their progress work to the JCC and other approving authorities for their comments and contribution knowing the different kinds of works that will be undertaken and other mitigating factors that will be in place. Furthermore, he suggested for the JCC to discuss with the Department of Environment on the EIA process and also if the progress report could be presented to other relevant agencies for them to start preparing from their side on what is required of them.


Mr. Vinesh (MOA) requested the Chamber of Commerce and Town Council to highlight some points discussed today to assist the communities while conducting meetings with the public.

Mr. Colin (MOA) further added that it gives a clear picture of what flood control means and the different roles that will be undertaken by the different agencies. He thanked the agencies' efforts and requested more coordination and more data and information so that JICA study team can examine in the study, and it contributes to a better and firm decision for the government and it is an essential issue.

Mr. Robin Ali (Nadi Town Council) expressed his sincere appreciation to the JICA study team for the efforts shown for presenting a more detail report and also informing the Nadi town council on how their work is progressing. Furthermore, he added the people of Nadi are looking forward to the implementation



of the project and also the declaration of Nadi town a city in 2017 by the Honorable Minister. He is confident with the support from Mr. Gray and Mr. Vinesh. He declares the meeting closed.



**MINUTES OF MEETING
OF
3RD TECHNICAL WORKING GROUP
FOR**

**THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI**

Nadi 8th December, 2015



Colin Simmons
Chairman
Technical Working Group



Takashi Toyoda
Deputy Team Leader
JICA Study Team

Attendance List of 3rd Technical Working Group

| No. | Name | Ministry/Organization | Designation |
|-----|----------------------|--|--|
| 1 | Colin Simmons | Ministry of Agriculture | Director of Land & Water Resource Management |
| 2 | Vinesh Kumar | Ministry of Agriculture | Principal Agriculture Office, West |
| 3 | Monika Bala | Ministry of Agriculture | Agriculture LWRM |
| 4 | George Tavo | Ministry of Infrastructure and Transport | Divisional Engineer West |
| 5 | Misaele Funaki | Ministry of Infrastructure and Transport | Senior Scientific Officer |
| 6 | Azreen Khan | Ministry of Foreign Affairs and International Co-operation | |
| 7 | Senivasa Waqairamasi | Ministry of Local Government, Urban Development, Housing and Environment | Senior Environment Officer West |
| 8 | Sanjesh Kumar | Ministry of Lands and Mineral Resource Lands Department | Principal Lands Officer |
| 9 | Kaie Nawasa | Ministry of Rural and Maritime Safety and Natural Disaster Management | Executive Officer -- Commissioner Western Office |
| 10 | Varea Waqa | Ministry of Rural and Maritime Safety and Natural Disaster Management | Commissioner Western Office |
| 11 | Kolinio Mudunasoko | iTaukei Land Trust Board | |
| 12 | Seremaia Koroi | Water Authority of Fiji | |
| 13 | Zaina Khan | Fiji Road Authority | |
| 14 | Braedon Lobb | MWH Global | |
| 15 | Robin K Ali | Nadi Town Council | Senior Administrator |
| 16 | Meli Naevo | Nadi Town Council | Acting Manager -- Building & Planning |
| 17 | Maraia Ubitau | Nadi Town Council | Consultant |
| 18 | Haroon S. Ali | Nadi Town Council | Manager Engineering |
| 19 | Rachna Dass | Nadi Chamber of Commerce | Administrator |
| 20 | Takashi Toyoda | JICA Study Team | Deputy Team Leader |
| 21 | Hajime Watanabe | JICA Study Team | Environmental & Social Considerations |
| 22 | Ashok Kumar | JICA Study Team | Assistant Engineer |
| 23 | Metuisela Mua | JICA Study Team | Facilitator |
| 24 | Amelina Ratubuli | JICA Study Team | Administrator/Secretary |



Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a study team (hereinafter referred to as "the JICA Study Team") concerning the Project for the Planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") in August 2014. Since then JICA Study Team has implemented the study activities of the Stage-1 and Stage-2 which are the first and second stage of the 3-stages of the Project and in which the basic studies and the master plan studies were carried out.

The main items that were discussed and understood upon between TWG and the JICA Study Team are summarized as follows:

1. The JICA Study Team explained the following matters in the 3 (three) sessions of the distributed materials to TWG members.

Session 1: Progress of the Study and Outline of Interim Report

1. Outline of the Study and Schedule
2. Progress of the Study and Outline of the Interim Report
3. Prospective of the Next Stage
4. Additional Data and Information Request for the Study
5. Public Consultations and Stake holders Meeting

Session 2: Outline of Master Plan and Priority Project

1. Master Plan
2. Priority Project
 - 2.1 Detailed Review of Priority Project
 - 2.2 Effect of Surrounding Dike
 - 2.3 Mitigation Measures for Negative Impact
3. Summary

Session 3: Environmental and Social Considerations

1. JICA Environmental and Social Consideration (ESC) Study
2. Difference between JICA ESC and Fiji EIA
3. Items studied and considered under ESC
4. Resettlement Action Plan (RAP)



Opening Prayer: Mr. Kaie Nawasa of Commissioner Westerns Office

Chairman Opening Remarks:


The Chairman Mr. Colin Simmons welcomed the members of the TWG expressing his appreciation for their attendance. He stated that the JICA Study Team is approaching the end phase of the study and a lot of issues has been raised which has been analyzed by the JICA Study Team. He updated the TWG on the decision taken at the 4th JCC Meeting on the alternative measures proposed by the JICA Study Team on the Priority Project for Widening of the Nadi River and the countermeasures for building of retarding basin and surrounding dikes.

Mr. Vinesh requested the Chairman for the TWG to quickly read through the minutes of the last TWG Meeting which was then moved by Mr. Robin Ali Special Administrator Nadi and was second by Mrs. Senivasa of Department of Environment.

Session 1: Progress of the Study of the Outline of the Interim Report
(Presentation by Mr. Toyoda)

Issues Discussed

1. The Chair requested the Fiji Meteorological Office on how best they can prepare themselves to take over the Early Flood Warning System established by the LWRM Division under the IWRM Project in Nadi and developing a MOU for data sharing.
2. Mr. Funaki (MoIT)'s response was that they have submitted their operational submission for next year and they have factored the Early Warning System budget into the submission in order to run the program. He further mentioned that the Department of Meteorology still requires to be convinced on the operational status of the system. He also informed the TWG that the MOU can be prepared for both parties..
3. Mr. Vinesh (MOA West) requested that we should do our best to maintain the system to keep it running and also share knowledge, skills and other resources. He further added that one site was not operational due to vandalism and theft. This is being addressed by collaboration of LWRM and Department of Meteorology
4. The Chair brought to the attention of the TWG the additional data and information requested to provide to the JICA Study Team to assist carry out the study.
5. Mr. Vinesh also emphasized that regulatory authorities and technical groups to be well informed of decisions made by the JCC. Some issues being raised was that they refused to release information and data. This were mainly due to the decisions by JCC not reaching TWG and other stakeholders.
6. The Chairman stated that it is the role of the representatives of various stakeholders attending the meeting to inform their superiors of all the decisions approved by the JCC.
7. Ms. Azreen Khan (MoFA) requested for timeline to be given to regulatory authorities to provide additional information and data. She further appreciated the JICA Study Team for the initiative shown in the progress of the study and also for bringing up the issue in regards to the request for data and information.



Session 2: Outline of Master Plan and Priority Project
(Presentation by Mr. Toyoda)

Issues Discussed

1. The Chairman briefly explained that the proposed plan for Surrounding Dike was approved in the 3rd JCC but then after conducting a more detailed study, the JICA Study Team reported the dike along the back road could be eliminated due to buildings, two road intersection and the tramline making its difficult for its construction. The JICA Study Team had proposed that it run along the Nawaka River which would provide a wider area of protection around Nadi Town. Furthermore, he clearly explained that this is the components of the Nadi River Flood Control Master Plan (hereinafter referred to as "the Master Plan") and the Priority Project.
2. Mrs. Senivasa (DOE West) asked, will the JICA Study Team anticipate any impact to the environment from the Smoothing of Alignment in the Malakua and Nawaka River tributaries?
3. Mr. Watanabe (JICA Study Team) responded that there will be some minor negative impact on the environment like reclamation to some parts of the river, but the old river channel will still be maintained and river flow will not change much. Therefore, river environment will be maintained.
4. Mrs. Maraia Ubitau (Nadi Town Council) questioned about the developments at south of Denarau area at right side of Nadi River mouth, what impact will that have on the Priority Project?
6. The Chairman stated that the JICA Study Team has considered the construction of Retarding Basin around the river mouth as a storage for overflow of water from upstream. He informed the TWG that the JICA Study Team had also carried out modeling of the situation. The TWG should be able to fully understand the impact of flood waters after the presentation of the simulation exercise by the JICA Study Team. Mrs. Maraia Ubitau raised a point for the developers to base their Development Plans in conjunction with this Priority Project.
7. Mrs. Senivasa added that the development works have been approved and land reclamation in progress. She added that some of the approved Development Plans (south and east of Denarau area) are to clear the tiri (mangroves) land. Furthermore, the Department of Environment acted on the approval given by Town & Country Planning and Ministry of Lands & Mineral Resources in regards to the issue and at the moment they are currently working together with the developers for monitoring of the EIA.
9. Mrs. Senivasa informed the TWG that they are willing to assist to provide the approval and development plans. The Chair informed her to provide information and data to be forwarded to the JICA Study Team so that they are aware of the current situation in regards to developments happening around the river mouth.
10. In regards to the impact of the Denarau Developments (south and east of Denarau area) on the Priority Project, Mr. Watanabe added that first of all we have to know what's the current situation and the processes involved.
10. Mr. Sanjesh (DOL) Kumar requested if the conditions of the approval could be looked into.
11. Ms Zaina (FRA) mentioned that there should be a checkpoint somewhere for any development along the Nadi River for new developers.



Session: 3 Environmental and Social Considerations
(Presentation by Mr. Watanabe)

Issues Discussed

1. The Chairman acknowledged the assistance and expressed his appreciation to the JICA Study Team in coming up with the Resettlement Action Plan as currently there is no policy in Fiji.
2. Mr. Sanjesh Kumar requested for timeframe as negotiations will take time for this exercise to be completed. He stated that the Climate Change Division is working to develop a guideline and policy by March 2016.
4. Mrs. Senivasa highlighted that it's a lesson for our authorities that we should consult with the JICA Study Team because they are carrying out the survey and her suggestion is for all regulatory authorities present today to learn and hear the concerns raised in this meeting. She further requested they would like to hear the views from the public.

Closing Address:

With no further issues to be discussed, the Chairman in his closing address expressed his appreciation to the JICA Study Team in carrying out the study and the TWG in discussing issues. He informed the TWG of the Public Consultation Meeting that was to be held on Wednesday 9th December, 2015 and requested for their support to attend and assist the JICA Study Team as other private stakeholders will be present.



Appendix-7

MM of Meeting with MOA

MINUTES OF MEETINGS
ON
INCEPTION REPORT
FOR
THE STUDY
ON
THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI
AGREED UPON BETWEEN
MINISTRY OF AGRICULTURE
AND
THE STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION AGENCY

Suva, August 22, 2014



Ropate Ligairi
 Permanent Secretary
 Ministry of Agriculture (MOA)



Yoshio Nakagawa
 Team Leader
 JICA Study Team

Witnessed by



Colin Simmons
 Director of Land and Water Resources
 Management (LWRM)
 MOA



Shigeki Ishigaki
 Project Formulation Advisor for Disaster
 Japan International Cooperation Agency
 (JICA)

Based on the Minutes of Meeting and Record of Discussion (hereinafter referred to as "M/M" and "R/D" respectively) signed between the Ministry of Agriculture of the Republic of Fiji (hereinafter referred to as "MOA") and Japan International Cooperation Agency (hereinafter referred to as "JICA") concerning the Project for the Planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") dated on February 7, 2014 and March 31, 2014 respectively, JICA dispatched a study team (hereinafter referred to as "the JICA Study Team") headed by Mr. Yoshio Nakagawa for the study of the Project. The JICA Study Team submitted a draft of Inception Report to MOA on August 15, 2014 and had a series of discussions on its contents with MOA. The list of attendance of this meeting is attached as Appendix-1 MOA agreed with the contents of the draft of Inception Report. The main items that were discussed and agreed upon between MOA and the JICA Study Team are summarized as follows:

1. Basic Concepts and Policies for the Project Implementation

Three basic concepts, five basic technical policies and three basic management policies of Project implementation are set as follows:

Three basic concepts:

- 1) Formulating the Resilient Flood Control Plan
- 2) Capacity Building leading to Improvement of Capability on Disaster Management
- 3) Introducing Japanese Technology, Experiences and Knowledge to Fiji

Five basic technical policies:

- 1) Formulation of Comprehensive Flood Control Master Plan based on the Integrated Flood Management Concepts
- 2) Comprehensive Sediment Management throughout the Basin
- 3) Selection of Priority Projects with Effective and Realistic Plan
- 4) Environmentally and Socially Feasible Planning
- 5) Introduction of New Technology, Experience and Knowledge of Japan

Three basic management policies:

- 1) Smooth Project Implementation & Support for Future Project Formulation
- 2) Closer Collaboration with C/P Organizations and JICA
- 3) Technical Transfer to Contribute to River Management Capacity Development in Government of Fiji and Pacific Region

2. Study Stages and Completion Period

The Study process is divided into 3 stages as shown below and will end about July 2016.

- Stage-1: Basic study, such as data and information collection, field investigations, preliminary analyses
- Stage-2: Planning of flood control master plan in the Nadi River basin
- Stage-3: Feasibility study for the selected priority project

3. Final Determination of Flood Control Structures

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Not only the diversion channel but also various types of flood control structures are to be examined by the JICA Study Team. The priority project is to be determined by discussion among MOA, the JICA Study Team and JICA Fiji Office through obtaining the consensus of Joint Coordination Committee (hereinafter referred to as ICC).

4. Hydraulic Analysis Model

Iyees-flow-DR and Iyees-flow-2D models which the JICA Study Team explained and proposed are to be applied to the runoff and inundation analyses of the Project.

5. Comprehensive Sediment Management of the Basin and the Seashore

The comprehensive management of the basin and the seashore is to be studied analysing sediment problems in the basin and the seashore by the one-dimensional riverbed variation model and the bathymetric change model.

6. PDM(Project Design Matrix)

The contents of PDM and its role for the Project management tool are well understood. The indicators and assumptions of the matrix will be changed, if necessary, with discussion among MOA, the JICA Study Team and JICA Fiji Office through obtaining the consensus of JCC.

7. Land Acquisition and Compensation

The land acquisition and compensation are very important factors to determine the location of flood control structures. The information of difficulty/easiness to solve the above matters is to be delivered to the JICA Study Team from time to time by MOA and the related authorities.

8. Data and Information Request

The JICA Study Team requested the data and the information as attached Annex-3 of Inception Report. MOA agreed to facilitate to obtain them as much as possible and assist the JICA Study Team to obtain them from other related authorities.

9. Cooperation and Coordination among Members

For the successful implementation of the Project, the cooperation and coordination are quite important among composed members of the Project, such as MOA, the JICA Study Team and other related ministries and agencies.

10. Counterpart Members of Fiji side

According to R/D, the following members are nominated.

(1) Counterpart (MOA)

Project Director: Permanent Secretary for Agriculture

Project Manager: Director of LWRM

Counterpart Personnel:

Principal Agriculture Officer , LWRM: Mr. Vinesh Kumar (tentative)

Principal Engineer (Civil-River Engineer), LWRM: Mr. Khin Maung Cho

Environmental Officer, LWRM: Ms. Josivini Sausauwai

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(2) Joint Coordination Committee (JCC)

JCC to be established is as shown Appendix-2. JCC will be held whenever deems it necessary on the occasion that the important decision should be made in policy making level. TOR will be developed to guide the JCC on its role.

(3) Technical Working Group(TWG)

Technical Working Group (hereinafter referred to as "TWG") will be established to discuss the technical issues in detail and to make the technical understanding immediately. The discussed matter should be reported to the superior of each member. The members should be nominated as soon as possible by JCC.

11. Technical Transfer

The JICA Study Team and the Counterparts jointly conduct the project activities and hold TWG meetings as an On-the-Job Training.

JICA will also provide the technical training in Japan to increase knowledge of river management.

The seminar/workshop for flood control will be held in Fiji introducing Japanese experience and knowledge by Japanese side. Moreover, in order to extend Fijian counterpart's knowledge, the lessons and learns through this project and technical training in Japan shall be introduced by Fiji counterpart side.

12. Report Submission

The reports and date of submission shall be as follows:

| | |
|--------------------|--|
| Inception Report | Half a month after commencement of the Study |
| Progress Report | End of March, 2015 (End of Stage-1) |
| Interim Report | End of October, 2015 (End of Stage-2) |
| Draft Final Report | End of April, 2016 (End of Stage-3) |
| Final Report | July 1, 2016 |

13. Summary of the Detailed Planning Survey

The JICA Study Team explained the summary of the Detailed Planning Survey results at the meeting. MOA well understood the results of the survey and requested the JICA Study Team to explain the key points of the result at the JCC.

Appendix-1 List of Attendance

Appendix-2 List of members of Joint Coordination Committee (JCC)

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| List of Attendants | |
|--|--|
| Name | Position |
| Fiji Side, MOA | |
| Ropate Ligairi | Permanent Secretary |
| Land & Water Resource Management (LWRM) | |
| Colin Simmons | Director |
| Kyaw Win | Principal Engineer |
| Khin Maung Cho | Principal Engineer |
| Rajiv Kumar | Senior Tech Assistant |
| Jose Ferrer | Senior Engineer |
| Aung gi | Senior Engineer |
| Animal Health & Production (AH&P) | |
| Tomasi Tunabuna | Director |
| Land Resource Planning (LRPD) | |
| Nakanieli Waku | Director |
| Finance | |
| Sikeli Balesava | Senior Accountant |
| Japan Side | |
| JICA Fiji Office | |
| Sigeki Ishigaki | Project Formulation Advisor |
| JICA Study Team | |
| Yoshio Nakagawa | Team Leader / Flood Management |
| Takashi Toyoda | Deputy Team Leader / Flood Management |
| Makoto Yonekura | Hydrological Analysis / Runoff Analysis |
| Masahiro Kitano | Flood Control Planning / River Planning |
| Takeshi Watanabe | Project Implementation Planning |
| Tomohiro Umeki | Operational coordination / Flood Control Planning, River Planning Assistance |

List of members of Joint Coordination Committee (JCC)

1. Fiji side

- Permanent Secretary for Foreign Affairs and International Co-operation
- Permanent Secretary for Agriculture
- Permanent Secretary for Fisheries and Forests
- Permanent Secretary for Works, Transport and Public Utilities
- Permanent Secretary of Local Government, Urban Development, Housing and Environment
- Permanent Secretary of Lands and Mineral Resources
- Permanent Secretary of Rural and Maritime Safety and Natural Disaster Management
- Permanent Secretary of Finance
- Permanent Secretary Strategic Planning, National Development and Statistics
- The Commissioner Western Office
- The General Manager, iTaukei Land Trust Board (TLTB)
- The Chief Executive Officer, Water Authority of Fiji (WAF)
- The Director, Fiji Meteorological Services (FMS)
- The Chief Executive Officer, Fiji Road Authority
- The Special Administrator Nadi Town Council
- The Nadi Chamber of Commerce

2. Japanese side

- JICA Fiji Office
- JICA Study Team of the Project
- Other Personnel concerned to be proposed by JICA

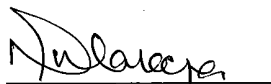
3. Observer

- Director SPC/SOPAC

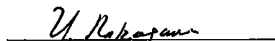
**MINUTES OF MEETINGS
ON
PROGRESS REPORT
FOR
THE STUDY
ON
THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI**

**AGREED UPON BETWEEN
MINISTRY OF AGRICULTURE
AND
THE STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION AGENCY**

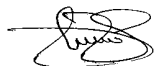
Suva, May 26, 2015



Maca Tulakepa
Deputy Secretary
Ministry of Agriculture (MOA)



Yoshio Nakagawa
Team Leader
JICA Study Team



Colin Simmons
Director of Land and Water Resources
Management (LWRM)
MOA

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a study team (hereinafter referred to as "the JICA Study Team") concerning the Project for the Planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") in August 2014. Since then JICA Study Team has implemented the study activities of the Stage-1 which is the first stage of the 3-stages of the Project and in which the basic studies such as data and information collection, field investigations, and preliminary analyses and preliminary flood control planning were carried out.

The JICA Study Team compiled the study results during the Stage-1 in the Draft of Progress Report and submitted it to the Ministry of Agriculture (hereinafter referred to as "MOA") and had a series of discussions on its contents with MOA. The last meeting was held on May 26, 2015 based on the summary document of the Progress Report. The list of attendance of this meeting is attached as Appndix-1.

MOA agreed with the contents of the Draft of the Progress Report. The main items discussed and agreed upon between MOA and JICA Study Team are summarized as follows;

1. The contents of the Draft of the Progress Report is acceptable, though after detail review of the report by MOA, the report shall be finalized by the JICA Study Team considering the, questions, comments and revisions presented by MOA.
2. The target of the flood control master plan is to be March 2012 flood which is the historical maximum flood judged by the past rainfall data analysis in the Nadi basin, and which has the occurrence probability of once in 50 years.
3. The important protected areas from flood damage are to be Nadi town, Nadi airport and Queens's road. (refer to P-2 of the document of Session 3, the places enclosed in yellow line).
4. The method of flood control plan is divided into 3(three) stretches of the Nadi River, which are the downstream (Estuary ~ 5.75km), the middle stream (5.75km ~ Back Road Bridge) and the upstream (upstream from Back Road Bridge), and which is divided by 2 points just downstream of the Nawaka river confluence and Back Road Bridge, is reasonable and acceptable. Because the middle stretch is the most important for the flood control plan in the Nadi basin, the priority project is to be selected in the middle stretch.
5. As main flood control structures, 4(four) types of structures such as River Improvement, Diversion Channel, Retarding Basin, Dam are examined. For the master plan, 3(three) types of solutions in the downstream stretch, 3(three) types of solutions in the middle stretch and 4(four) types of solutions in the upstream stretch are separately examined, and the following 2(two) alternatives are finally recommended by the JICA Study Team as the Master Plan.
 - A. Combination-1 (downstream +middle stream+ upstream stretch)
C-1: Retarding Basin (D-2) + River Improvement (M-1) + Dam (U-2)
 - B. Combination-2
C-2: Retarding Basin (D-2) +Diversion Route-2(M-3) + Dam (U-2)







6. For the Priority Project the following 2(two) alternatives are recommended based on the Master Plan Proposal outlined in paragraph 5.

- M-1 River Improvement
- M-3 Diversion Channel (Route-2)

For M-1 of Priority Project, the Nadi Town Bridge shall be rebuilt due to widening of the present river.

7. For the construction of the Priority Project, the land acquisition is required. The land for the construction site is divided into three categories such as River and water area, Native Land and Free Hold Land, among which the latter two categories are subject to land acquisition.
8. According to MOA, generally it is rather difficult to acquire the Native Land than the Free Hold Land so that this matter might be an important factor for the selection of final solution in the Joint Coordination Committee (hereinafter referred to as "JCC").
9. In order to keep the Study schedule, topographical survey and geotechnical survey for priority project shall be implemented as soon as possible. In additions, in order to get advice from the Advisory Committee for Environmental and Social Considerations in Japan on time, the selection of Priority Project shall be conducted as soon as possible. Therefore, the selection of Priority Project shall be made within two weeks after 2nd JCC meeting held on June 3, 2015. MOA understands this schedule and suggested this schedule shall be emphasized in the 2nd JCC meeting.
10. The Study schedule is behind about 2(two) months from the original schedule in which the presentation of the Progress Report and the holding of 2nd JCC were scheduled at the end of March 2015 since the data collection and river survey was delayed and a part of preliminary flood control planning in Stage-2 was implemented in advance. However the submission of the Interim Report (I/TR) in Stage-2 and the completion of the whole Study shall not be delayed.

List of Attendance

| Name | Position |
|------------------------|--|
| MOA | |
| Maca Tulakepa | Deputy Secretary (Corporate Services) |
| Miliakere Nawaikula | Acting Deputy Secretary (Agricultural Development) |
| Colin Simmons | Director, LWRM |
| Jone Sovalawa | Acting Director, Crop Extension |
| Apaifia Macanawai | Acting Director, Research |
| Pauliasi Tuilau | Acting Chief Economist |
| Eroni Tamani | Principal Research Officer, Animal and Health Production |
| Mahendra Kumar | Principal Agriculture Officer, LWRM |
| Panapasa Varea | Valuer, Land Research and Planning Development |
| JICA Study Team | |
| Yoshio Nakagawa | Team Leader |
| Takashi Toyoda | Deputy Team Leader |

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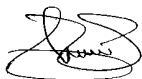
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**MINUTES OF MEETINGS
ON
INTERIM REPORT
FOR
THE STUDY
ON
THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI**

**AGREED UPON BETWEEN
MINISTREY OF AGRICULTURE
AND
THE STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION AGENCY**

Suva, October 30, 2015



Colin Simmons
Director of Land and Water Resources
Management (LWRM)
Ministry of Agriculture (MOA)



Yoshio Nakagawa
Team Leader
JICA Study Team

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a study team (hereinafter referred to as "the JICA Study Team") concerning the Project for the Planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") in August 2014. Since then JICA Study Team has implemented the study activities of the Stage-1 and Stage-2 which are the first and second stage of the 3-stages of the Project and in which the basic studies and the master plan studies were carried out.

The JICA Study Team compiled the study results during the Stage-2 in the Draft of Interim Report and submitted it to the Ministry of Agriculture (hereinafter referred to as "MOA") and had a series of discussions on its contents with MOA. The last meeting was held on October 30, 2015 based on the distributed explanation materials of the Interim Report. The list of attendance of this meeting is attached as Appendix-1. And the explanation materials are also attached as Appendix-2.

MOA agreed with the contents of the Draft of the Interim Report. The main items discussed and agreed upon between MOA and the JICA Study Team is summarized as follows.

1. The JICA Study Team explained the following matters in the 3 (three) sessions of the distributed materials to MOA members.

Session 1: Progress of the Study and Outline of Interim Report

1. Outline of the Study and Schedule
2. Progress of the Study and Outline of the Interim Report
3. Prospective of the Next Stage
4. Additional Data and Information Request for the Study
5. Public Consultations and Stake holders Meeting

Session 2: Outline of Master Plan and Priority Project

1. Master Plan
2. Priority Project
- 2.1 Detailed Review of Priority Project
- 2.2 Effect of Surrounding Dike
- 2.3 Mitigation Measures for Negative Impact
3. Summary

Session 3: Issues toward Implementation of the Project

1. Process to the Implementation of the Project
2. General Process and Timeline of Loan Project
3. Proposal of a Task Force for Preparation of the Project

2. The contents of the Draft of Interim Report is acceptable, though after detail review of the report by MOA, the report shall be finalized by the JICA Study Team considering the questions, the comments



and the revisions presented by MOA.

3. The components of the Master Plan are determined on the condition of JCC approval as shown below (refer to Session 2, P-8).

- ① River Widening in middle stream
- ② Retarding Basins (A&B) in upstream
- ③ Countermeasures for negative impact
 - Ring Dike around Moala village
 - Surrounding Dike for Nadi town
 - Shortcut in tributaries
- ④ Retarding Basin and River Improvement in downstream including dike along the Queen's Road
- ⑤ River Improvement and Retarding Basins in tributaries
- ⑥ Dam and river improvement in upstream of main stream
- ⑦ Rebuilding 2 (two) bridges

4. The components of the Priority Project are determined on the condition of JCC approval as shown below (refer to Session 2, P-29).

- ① River Widening
- ② Retarding Basin(A &B)
- ③ Surrounding Dike for Nadi town
- ④ Ring Dike around Moala village
- ⑤ Shortcut in tributaries
- ⑥ Rebuilding of 2(two) Bridges

5. Due to construction of surrounding dike for Nadi town, the negative impact of increase in inundation depth will occur mainly at left bank side at Nawaka and Malakua Rivers since the surrounding dike prevents the flood water from the both tributaries.

2 (two) mitigation works, 1) a group of 7 (seven) retarding basins (Approximately 185ha in total area); and 2) smoothing of alignment (shortcut) of the Nawaka River and Malakua River (Approximately 500m in length and 30m in width), against increase in inundation depth were compared and the latter was found to be better solution. Even though, the necessity of smoothing of alignment (shortcut) shall be determined at the 4th JCC meeting considering the extent of inundation damage and the scale of its

work.

6. The proposed Non-structural Measures in Master Plan including those in the Priority Project are shown in Session 1, P-8 is acceptable.
7. The JICA Study Team requested the data and the information as shown in Session 1, P-19.
8. As to the prospective schedule of the Study, the Feasibility Study for Priority Project shall be conducted in stage-3, and the outline of the result shall be confirmed on February in 2016 at 5th JCC. Draft Final Report shall be submitted in April, 2016.
- In order to keep the Study schedule, topographical survey, geotechnical survey and social and environmental consideration survey for the priority project have to be implemented as soon as possible. Therefore, the decision on the components of Priority Project is to be made at 4th JCC meeting.
- After the 4th JCC meeting, the 2nd Public Consultation and Stake holders meeting will be held at the end of November 2015 or at latest at the beginning of December 2015.
9. In the 2nd Public Consultation and Stake holders meeting, the items such as "Outline of components of M/P and Priority Project", "Scheme of Environmental and Social Considerations (EIA and Resettlement Action Plan)" shall be explained.
10. As to the implementation and O&M of the Project, the approval of the project implementation and declaration of cut-off date shall be considered as early as possible by Fiji Government so that the JICA Study Team will effectively assist the Government on the implementation of EIA and development of Resettlement Action Plan in this study period.
11. Institutional arrangement for project implementation, which Fiji government has a responsibility, shall be conducted in line with implementation of Environment and Social Consideration Study and development of the Resettlement Action Plan, which are implemented by the JICA Study Team in the Project.
12. The following procedures, negotiations, surveys and so on are required to be considered by the Fiji Government before the implementation of the Project after this Study.

- EIA for implementation incl. disclosure process after the declaration of cut-off date
- Negotiations with residents for Land Acquisition, Lease, Compensations, House, Relocations, etc.
- Surveys and documentation for Boundary Settings, Fishing Rights, Business (Tenants), Merchantable Trees, etc.
- Loan agreement (Funding Agreement) for the Project, etc.

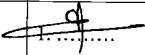
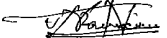

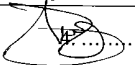
Appendix-1

List of Attendance

| Name | Position |
|------------------------|---|
| MOA | |
| Colin Simmons | Director, LWRM |
| Mahendra Kumar | Principal Agricultural Officer, LWRM |
| Khin Maung Cho | Principal Engineer (River Engineer), LWRM |
| Josefa Nawai | Engineer, LWRM |
| JICA Study Team | |
| Yoshio Nakagawa | Team Leader |
| Takashi Toyoda | Deputy Team Leader |
| Takeshi Watanabe | Project Implementation Planning |
| Tomohiro Umeki | Non-Structural Measures |

ATTENDANT LIST

Subject :
 Day/Date :
 Time :
 Place :

| No. | Name | Organization/Position | Sign |
|-----|----------------|-----------------------|---|
| 1. | MAHENDRA KUMAR | LWRM, PAO |  |
| 2. | JOSEFA NAWAI | LWRM, ENGINEER |  |
| 3. | KHIN MAUNG CHO | LWRM, PE(RE) | 3.  |
| 4. | Colin Simmons | Director LWRM |  |
| 5. | | | 5. |
| 6. | | | 6. |
| 7. | | | 7. |
| 8. | | | 8. |
| 9. | | | 9. |
| 10. | | | 10. |
| 11. | | | 11. |
| 12. | | | 12. |




Appendix-2

Explanation Materials of Interim Report

Session 1: Progress of the Study and Outline of Interim Report

Session 2: Outline of Master Plan and Priority Project

Session 3: Issues toward Implementation of the Project

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**MINUTES OF MEETINGS
ON
FEASIBILITY STUDY OF PRIORITY PROJECT
FOR
THE STUDY
ON
THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI

AGREED UPON BETWEEN
MINISTREY OF AGRICULTURE
AND
THE STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION AGENCY**

Suva, April 25, 2016

Colin Simmons
Director of Land and Water Resources
Management (LWRM)
Ministry of Agriculture (MOA)

Yoshio Nakagawa
Team Leader
JICA Study Team

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a study team (hereinafter referred to as "the JICA Study Team") concerning the Project for the Planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") in August 2014. Since then JICA Study Team has implemented the study activities of the Stage-1, Stage-2 and Stage-3 which are the 3-stages of the Project and in which the basic study, the master plan study and the feasibility study were carried out respectively.

The JICA Study Team compiled the feasibility study results during the Stage-3 and submitted the explanation materials to the Ministry of Agriculture (hereinafter referred to as "MOA") on 25 April 2016 and the meeting was held on April 25, 2016 based on the distributed explanation materials of the results of the Feasibility Study and other related important matters.

The list of attendance of this meeting is attached as Appendix-1. And the explanation materials are also attached as Appendix-2.

MOA agreed with the contents of the explanation materials of the Feasibility Study and other related important matters.

The main items discussed and agreed upon between MOA and the JICA Study Team is summarized as follows.

1. The JICA Study Team explained the following matters in the 3 (three) sessions of the distributed materials to MOA members.

Session 1: Progress of the Study and Outline of the Feasibility Study

1. Outline of the Study and Schedule
2. Progress of the Study and Outline of the Feasibility Study
3. Prospective of the Next Stage
4. Public Consultation and Stake Holders Meeting
5. Introduction of Seminar

Session 2: Result of Feasibility Study of Priority Project

1. Component of Priority Project
2. Outline of Design of Priority Project
 - ① River Widening
 - ② Retarding Basin A, B
 - ③ Surrounding Dike
 - ④ Ring Dike
 - ⑤ Shortcut of tributaries
 - ⑥ Nadi Town Bridge
 - ⑦ Old Queens Road Bridge
3. Feasibility (Tentative)

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Session 3: Issues toward Implementation of the Project

1. Project Implementation
 - 1.1 Project Implementation Schedule
 - 1.1 Proposed Project Implementation Structure
2. Social and Environmental Study Results by JICA Study
 - 2.1 Outline of result of JICA EIA study
 - 2.2 Required following EIA process by Fiji side

2. Session 1: Progress of the Study and Outline of Draft Final Report

- 2-1. The JICA Study Team presented and explained the progress and the outline of the Feasibility Study.

Some of feasibility study items studied in Stage-3 were explained by the JICA Study Team and accepted by MOA (refer to Session 1, P-5~P7).

- 2-2. In the prospective schedule of the Study, the Feasibility Study for the Priority Project shall be completed until the end of May 2016 and the Draft Final Report shall be submitted to MOA at the end of May 2016. And the Final Report shall be submitted to MOA at the beginning of July 2016.

After the 5th JCC meeting, the 3rd Public Consultation and Stake holders meeting will be held at the beginning of May 2016 (refer to Session 1, P-8).

- 2-3. In the 3rd Public Consultation and Stake holders meeting, the JICA Study Team explained the objective is to promote understanding and cooperation among the local residents and related agencies and organizations of the necessity of the Project and to collect opinions for the Project.

The outline of the design of the Priority Project, Scheme of Environmental and Social Considerations (EIA, RAP: Resettlement Action Plan), Contents of the Social Survey by the JICA Study and general schedule of next process shall be explained (refer to Session 1, P-9,10).

- 2-4. The JICA Study Team presented the proposed seminar on related issues to the flood control projects in Fiji and Japan. The objective is to introduce Japanese Technology and lessons learnt for water related disaster, to present the outline of the Study and issues towards promoting project implementation. The seminar will be held after the 6th JCC meeting during the week of 11th day of July 2016. The seminar will comprise of presentations from Fiji Agencies, the JICA Study Team and Japanese experienced administrative officer and professor (refer to Session 1, P-11,12).

- 2-5. The JICA Study Team explained the outline of the situation of the Tropical Cyclone Winston and Zena. The issue highlighted was the cause of inundation in Nadi Town from the Nawaka River and the comparison of the rainfall with the 2012 flood. The height of the river levels at the Nadi Bridge for the 2012 flood, the design high water level after the widening of the river and the current level caused by Tropical Zena was indicated (refer to Topics P-1~P-10).

3. Session 2: Result of Feasibility Study of Priority Project

- 3-1. The components of the Priority Project agreed at the previous JCC meeting shown below was presented (refer to Session 2, P-3, P-5).

- ① River Widening

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- ② Retarding Basin A, B
- ③ Surrounding dike
- ④ Ring Dike
- ⑤ Shortcut of tributaries
- ⑥ Rebuilding of Bridge (Nadi Town (Namotomoto) Bridge)
- ⑦ Rebuilding of Bridge (Old Queens Road Bridge)

3-2. The outline of the design features of the Priority Project described above was explained by the JICA Study Team and was accepted by MOA. All components are important and required in order to eliminate the inundation in the Important Protected Area as the Priority Project. The effectiveness of the widening of the Nadi River was presented as an example in reducing the inundation area and water level within the priority project area (refer to Session 2, P-8 ~P-25)..

3-3. Since the economic evaluation and project cost are still under studies, the final results will be reported to MOA as soon as this is completed. The economic evaluation, the economic evaluation indexes, premises of evaluation, consideration of flood control benefit and so on were explained and accepted by MOA (Session 2, P-27~P30). The components of the cost estimated in the economic evaluation such as base cost (construction and engineering cost), contingency cost, land acquisition and compensation cost, project administration cost, O&M cost were explained and accepted by MOA (refer to Session 2, P-29).

4. Session 3: Issues toward Implementation of the Project

4-1. The tentative implementation schedule of the Priority Project was presented by JICA Study Team as an example (refer to Session 3, P-2).

4-2 The tentative project implementation structure for the Priority Project was presented by JICA Study Team as an example (refer to Session 3, P-3.4), its establishment is expected as soon as possible for the early commencement of the Priority Project.



4-3. The outline of the assessment of environmental and social impacts caused by the Priority Project such as pollution, natural conditions and social conditions and preparation of resettlement action Plan (RAP) was explained by JICA Study Team, and accepted by MOA (Session 3, P-5~P-7).

The results of the assessment indicate that the change of natural & social conditions is relatively small, and the number of relocation limited to 17 houses in the Feasibility Study. This was noted and accepted by the MOA.

4-4. The required EIA process to be followed by Fiji side was explained by JICA Study Team together with JICA EIA study results which was accepted by MOA (Session 3, P8).

The EIA by Fiji is the process that is required as soon as possible for the early commencement of the Priority Project.

5. MOA informed JICA Study Team to mention the effectiveness of the river widening only and the date of 3rd Public Consultation in coming 5th JCC. Details of the hydrological analysis result for the Priority Project should also be made available to MOA to study and to support the Feasibility Study Results.

6. The schedule of 6th JCC and Seminar is confirmed by MOA at this time as follow.

- 6th JCC: during the week of date of May 30, 2016
- Seminar: during the week of 11th day of July 2016




Appendix-1

List of Attendance


| Name | Position |
|------------------------|---|
| MOA | |
| Colin Simmons | Director, LWRM |
| Khin Maung Cho | Principal Engineer (River Engineer), LWRM |
| JICA Study Team | |
| Yoshio Nakagawa | Team Leader |
| Takashi Toyoda | Deputy Team Leader |



Appendix-2

Reference Documents

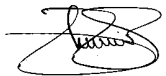
- Reference: Distributed materials at the Meeting
- Session 1: Progress of the Study and Outline of Draft Final Report
- Session 2: Draft Result of Feasibility Study of Priority Project
- Session 3: Issues toward Implementation of the Project



MINUTES OF MEETINGS
ON
DRAFT FINAL REPORT
FOR
THE STUDY
ON
THE PROJECT FOR THE PLANNING OF THE NADI RIVER
FLOOD CONTROL STRUCTURES
IN
THE REPUBLIC OF FIJI

AGREED UPON BETWEEN
MINISTRY OF AGRICULTURE
AND
THE STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION AGENCY

Suva, June 2, 2016



Colin Simmons
Director of Land and Water Resources
Management (LWRM)
Ministry of Agriculture (MOA)



Yoshio Nakagawa
Team Leader
JICA Study Team

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a study team (hereinafter referred to as "the JICA Study Team") concerning the Project for the Planning of the Nadi River Flood Control Structures (hereinafter referred to as "the Project") in August 2014. Since then JICA Study Team has implemented the study activities of the Stage-1, Stage-2 and Stage-3 which are the 3-stages of the Project and in which the basic study, the master plan study and the feasibility study were carried out respectively.

The JICA Study Team prepared the Draft Final Report and submitted the Report and explanation materials to the Ministry of Agriculture (hereinafter referred to as "MOA") on June 2, 2016 and the meeting was held on June 2, 2016 based on the distributed explanation materials of the Draft Final Report and other related important matters.

The list of attendance of this meeting is attached as Appendix-1. And the explanation materials are also attached as Appendix-2.

MOA agreed with the contents of the explanation materials of the Draft Final Report and other related important matters.

The main items discussed and agreed upon between MOA and the JICA Study Team is summarized as follows.

1. The JICA Study Team explained the following matters in the two (2) sessions of the distributed materials to MOA.

Session 1: Briefing of the Study and of Draft Final Report

1. Outline of the Study and Schedule
2. Briefing of Draft Final Report (DFR)
3. Issues toward Implementation
4. Introduction of Seminar
5. Conclusion and Recommendation

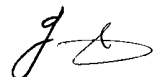
Session 2: Summary of the Result of the Study

1. Component of the Master Plan
2. Component of the Priority Project
3. Construction Plan and Construction Schedule
4. Feasibility

2. Session 1: Briefing of the Study and of Draft Final Report

2-1. The components of the Draft Final Report are as follows;

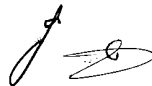
- (1) Summary Report
- (2) Main Report I: Master Plan Study
Chapter 1 Introduction
Chapter 2 Basic Data Collection of Basin and Flood Control Plans and Countermeasures



- Chapter 3 Field Investigations
- Chapter 4 Summary of Present Conditions and Issues of Flood Control and Basin Management in Nadi River
- Chapter 5 Hydrological Analysis of Flood Control
- Chapter 6 Consideration for Flood Control Measures
- Chapter 7 Flood Control Plan and Channel Improvement Plan
- Chapter 8 Preliminary Design of Flood Control Structures
- Chapter 9 Comprehensive Sediment Management
- Chapter 10 Sea coast
- Chapter 11 Non-Structural Measure
- Chapter 12 Environmental and Social Considerations
- Chapter 13 Project Implementation Plan
- Chapter 14 Master Plan for Flood Control
- Chapter 15 Draft Priority Project
- Chapter 16 Major Meetings in Fiji
- (3) Main Report II: Feasibility Study
 - Chapter 17 Additional Field Investigations
 - Chapter 18 Components of the Priority Project
 - Chapter 19 Preliminary Design and Construction Plan
 - Chapter 20 Project Cost Estimation
 - Chapter 21 Project Implementation Plan
 - Chapter 22 Economic feasibility of the projects
 - Chapter 23 Environmental and Social Consideration
 - Chapter 24 Project Evaluation and Recommendations
- (4) Data Book
 - 1) Observation Data (Rainfall, Water Level, Seacoast)
 - 2) Investigation Data (Boring, Soil Test, Sediment, Seacoast, Water Level)
 - 3) Survey Data
 - 4) Environmental and Social Survey Data
 - 5) Drawings
 - 6) Quantity Calculation

The components of the Draft Final Report described above was explained by the JICA Study Team and accepted by MOA

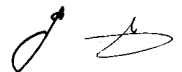
- 2-2. The required steps to the implementation of the Priority Project and present issues toward implementation were explained by the JICA Study Team as follows:
- Institution Arrangement for project preparation
 - Securing Finance
 - Selection of Consultant for Detailed Design and Construction Supervision
 - Detailed Design



- EIA incl. disclosure process, Public Consultations and declaration of implementation like moratorium
 - Surveys and documentation for Boundary Settings, Fishing Rights, Business (Tenants), Merchantable Trees, etc.
 - Negotiations with residents for Land Acquisition, Lease, Compensations, House Relocations, etc.
 - Selection of Contractor, etc.
- 2-3. The social and environmental study such as pollution, natural conditions and social conditions carried out by the JICA Study Team was explained with the conclusion that no significant impact will be expected by the Project. However the monitoring of social and environment impact before, during and after construction should be carefully implemented and mitigation works will be examined if necessary, taking into consideration residents who earn their livelihood from river and utilize the river. The above matters were noted by MOA.
- 2-4. The JICA Study Team assisted a preparation of the draft Resettlement Action Plan (RAP). The number of house relocation affected by the Project is limited to seventeen (17). After the endorsement for implementation of the Project, land acquisition and resettlement will be implemented in line with the RAP. The RAP should be agreed by the residents affected by the Project prior to the Project implementation and will be modified based on the actual situation by the Project implementation agency. The above matters were noted by MOA.
- 2-5. The seminar program presented by JICA Study Team in the 5th JCC was confirmed by MOA. The seminar will be held on 13 and 14 July 2016.
- 2-6. The conclusion of the Study and recommendations was explained by the JICA Study Team as shown below and accepted by MOA.
- (1) Conclusion
- When the Master Plan and Priority Project formulated in the Study will be completed, it will be possible to minimize flood damages by the historical maximum scale of flood with occurrence probability of once in 50 years in the entire basin of Nadi River by the Master Plan and in the Important Protected Area by the Priority Project.
- (2) Recommendations
- 1) For flood damage mitigation, the Priority Project should be implemented as soon as possible. The other components of the Master Plan should also be considered for implementation.
 - 2) Non-structural measures are also required in order to mitigate flood damage during the construction of the Priority Project and to mitigate flood damage by flood exceeding the design level.
 - 3) Remaining issues related to inland water damage due to rainfall water and drainage problems should be also solved in the near future.

3. Session 2: Summary of the Result of the Study

- 3-1. The layout and components of the Master Plan structural measures were presented by the JICA Study Team as shown below.



- (1) Retarding Basin including Dike along the Queen's Road and Surrounding Dike of retarding basin in downstream and River Improvement in downstream.
- (2) Ring Dike
- (3) River Widening including rebuilding of two (2) bridges
- (4) Retarding Basin A,B in upstream
- (5) Dam and River improvement in upstream
- (6) Retarding Basins and River Improvement in Tributaries including rebuilding of 4(four) bridges in tributaries

3-2. The components of the Master Plan in non-structural measures are presented by the JICA Study Team as shown below.

- (1) Strengthening flood forecasting technology, such as expansion of rainfall gauge, water level gauge and introduction of real-time monitoring camera
- (2) Strengthening of understanding flood risk with flood hazard map
- (3) Establishing a system of evaluation of Pre-disaster activity / existing measures and feedback
- (4) Strengthening flood forecasting technology, such as accurate observation equipment and flood forecasting system
- (5) Strengthening disaster management system (Disaster prevention planning, Development and update of SOP
- (6) Economic evaluation of disaster prevention investment, Strengthening of emergency assistance system, etc.)
- (7) Development of land-use regulation
- (8) Strengthening river basin management
- (9) Strengthening disaster risk management for economic damage by development of regional Business Continuity Plan (BCP)

3-3. The components of the Priority Project structural measures and design features such as plan and cross sections of each components was explained by the JICA Study Team and accepted by MOA.

The components of the Priority Project are as follows:

- ① River Widening
- ② Retarding Basin A, B
- ③ Surrounding dike
- ④ Ring Dike
- ⑤ Shortcut of tributaries
- ⑥ Rebuilding of Bridge (Nadi Town (Namotomoto) Bridge)
- ⑦ Rebuilding of Bridge (Old Queens Road Bridge)

3-4. The non-structural measures in the Priority Project is as follows;

- (1) Strengthening flood forecasting technology, such as expansion of rainfall gauge, water level gauge and real-time monitoring camera
- (2) Strengthening of understanding flood risk with flood hazard map
- (3) Establishing a system of evaluation of Pre-disaster activity / existing measures and feedback

As to the item (1) above, the proposed location and number of hydrological observations was explained by the JICA Study Team.

3-5. The approximate work quantity of the river works which is the major part of the Priority Project was explained and accepted by MOA. The work quantity of major works is as shown below.

| | |
|----------------|--|
| Excavation | 5,500 x 10 ³ m ³ |
| Embankment | 1,820 x 10 ³ m ³ |
| Backfill | 920 x 10 ³ m ³ |
| Spoil disposal | 2,760 x 10 ³ m ³ |

3-6. The construction is divided 5 packages and they are divided into sub construction sections as shown below.

Package-1: River Widening

P1-1; 5.0km to 9.75km

P1-2; 10.0km to 14.0km

P1-3; 14.0km to 18.75km

Package-2: Retarding Basin A & B

Package-3: Ring Dike

Package-4: Surrounding Dike and Shortcut

P4-1; Surrounding Dike

P4-2; Shortcut

Package-5: Rebuilding of two(2) bridges

The location and work contents of each construction division was explained by the JICA Study Team and noted by MOA.

3-7. The excavation method in rainy season and dry season was shown and explained by the JICA Study Team and noted by MOA. The method is that in the rainy season both side of the banks is excavated at higher level than the elevation of the average maximum sea level during the past five (5) years +0.5m of allowance. In the dry season the coffer dam is installed on the riverbed, and the river water is diverted to either side of the coffer dam, then the opposite side is excavated in dry condition, after the same process repeated in the other side, then the coffer dam is finally demolished.

In the dry season, the turbid water caused by the excavation work is collected inside the coffer dam so that the pollution of the river water will not occur.

3-8. The tentative location of the disposal sites and transportation route was shown and explained by the JICA Study Team and noted by MOA. There are nine (9) potential locations of disposal areas from A to I with total capacity of 3,130 x 10³m³ which is sufficient compared with the estimated soil disposal volume of 2,760 x 10³m³. The main transportation routes are planned in the excavation area of river widening as a temporary construction road so that the traffic hazard to public transportation will be limited. The details of the soil disposal plan will be examined in the implementation stage of the Priority Project.

3-9 The approximate construction schedule was explained and noted by MOA. The total construction period of the Priority Project will be four (4) years.

3-10. The economic evaluation, the economic evaluation indexes, premises of evaluation, consideration of flood control benefit and project cost evaluation were explained and accepted by MOA.

The results of economic evaluation are shown below.

- Economic internal rate of return (EIRR): 12.0%
- Benefit/cost ratio (B/C ratio): 1.2

Since all indexes of the above clear the threshold values of economic evaluation such as EIRR;10% and B/C; 1.0, the Priority Project is feasible.

4. Submission of the Final Report

The Final Report will be submitted to MOA at the beginning of July 2016 after receiving the comments on the Draft Final Report that are requested to be delivered to the JICA Study Team within two (2) weeks (until June 20, 2016).



List of Attendance

| Name | Position |
|------------------------|---|
| MOA | |
| Colin Simmons | Director, LWRM |
| Khin Maung Cho | Principal Engineer (River Engineer), LWRM |
| Josefa Nawai | Engineer (River Engineer), LWRM |
| JICA Study Team | |
| Yoshio Nakagawa | Team Leader |
| Takashi Toyoda | Deputy Team Leader |



Appendix-2

Reference Documents

Reference: Distributed materials at the Meeting

Session 1: Briefing of the Study and of Draft Final Report

Session 2: Summary of the Result of the Study

