

## Appendix-1 Member List of the Study Team

The study team consists of the following members.

### (1) Field Survey

Name	Assignment	Organization
Akihiko Hosino	Leader	Deputy Resident Representative, JICA Malawi Office
Takahiro Goto	Project Coordinator	Transportation and ICT Group, Economic Infrastructure Department, JICA
Teruo Nakagawa	Chief Consultant/ Road Maintenance Planner	Central Consultant Inc.
Kazumasa Tada	Bridge Designer I	International Engineering Economic Design Corporation
Shinichi Ueda	Bridge Designer II	Central Consultant Inc.
Noboru Yokoyama	Natural Condition Surveyor I (Topography, Geology)	Earth System Science
Kanji Watanabe	Socio-Environmentalist	SOWA Consultant Inc.
Jun Umeno	Natural Condition Surveyor II (Hydrology)	Central Consultant Inc.
Masahiro Shiratori	Construction Planner/ Cost Estimator	Central Consultant Inc.
Shinya Toyosaki	Road Designer	Central Consultant Inc.

### (2) Explanation of the Draft Outline Design

Name	Assignment	Organization
Sinji Obuchi	Leader	Resident Representative , JICA Malawi Office
Hiroyuki Yokoi	Project Coordinator	Transportation and ICT Group, Economic Infrastructure Department, JICA
Teruo Nakagawa	Chief Consultant/ Road Maintenance Planner	Central Consultant Inc.
Kazumasa Tada	Bridge Designer I	International Engineering Economic Design Corporation

Appendix-2 Study Schedule

(1) Field Survey

No.	Month	Date	Day of the week	Leader	Project Coordinator	Chief Consultant	Bridge Designer I	Bridge Designer II	Natural Condition Surveyor I	Natural Condition Surveyor II	Cost Estimator	Socio-Environmentalist	Road Designer
				Akaiako Hoshino	Takahiro Goto	Teruo Nakagawa	Kazumasa Tada	Shinichi Ueda	Noboru Yokoyama	Jun Umemo	Masahiro Shiratori	Kanji Watanabe (added by CCI)	Shinya Toyosaki (added by CCI)
2	23	Mon											
3	24	Tue											
4	25	Wed											
5	26	Thu											
6	27	Fri											
7	28	Sat											
8	1	Sun											
9	2	Mon		Lilongwe⇒Mzuzu									Lilongwe⇒Johannesburg
10	3	Tue											Johannesburg⇒
11	4	Wed											⇒Hong Kong⇒Narita
12	5	Thu											
13	6	Fri											
14	7	Sat											
15	8	Sun											
16	9	Mon											
17	10	Tue											
18	11	Wed											
19	12	Thu		Lilongwe⇒Johannesburg									Lilongwe⇒Johannesburg
20	13	Fri		Johannesburg⇒Hong Kong									Johannesburg⇒Hong Kong
21	14	Sat		Hong Kong⇒Narita									Hong Kong⇒Narita
22	15	Sun											
23	16	Mon											
24	17	Tue											
25	18	Wed											
26	19	Thu											
27	20	Fri											
28	21	Sat											
29	22	Sun											
30	23	Mon											
31	24	Tue											
32	25	Wed											
33	26	Thu											
34	27	Fri											
35	28	Sat											
36	29	Sun											
37	30	Mon											
38	31	Tue											
39	1	Wed											
40	2	Thu											
41	3	Fri											
42	4	Sat											
43	5	Sun											
44	6	Mon											
45	7	Tue											
46	8	Wed											
47	9	Thu											
48	10	Fri											
49	11	Sat											
50	12	Sun											
51	13	Mon											
52	14	Tue											
53	15	Wed											
54	16	Thu											

(2) Explanation of the Draft Outline Design

No.	Month	Date	Day of the week	Leader	Project Coordinator	Chief Consultant	Bridge Designer I	
				Shinji Obuchi	Hiroyuki Yokoi	Teruo Nakagawa	Kazumasa Tada	
1	8	7	Fri		14:05 Arrive at Lilongwe 16:00 Meeting at JICA Malawi office			
2		8	Sat		Site inspection (existing Rukuru Bridge)			
3		9	Sun		Mzuzu→Lilongwe			
4		10	Mon	9:00-10:30 Outline design and outline explanation (MOTPI&RA)				
5		11	Tue	10:00-11:30 Minutes of Discussions (MOTPI&RA)				
6		12	Wed	10:00 Sign minutes (MOTPI, RA, Ministry of Finance) 15:00 Report to Malawi Embassy of Japan 16:30 Report to JICA Malawi office				
7		13	Thu		Lilongwe 14:55→Johannesburg 17:25			
8		14	Fri		Johannesburg 16:30→			
9		15	Sat		→12:05 Hong Kong 15:10→Narita 20:20			

### Appendix-3 List of Parties Concerned in the Recipient Country

- (1) Ministry of Transport and Public Infrastructure (MOTPI)
  - Mr.Francis B Chinsinga Secretary
  - Mr.Collins K Kumangirana Director of Roads
- (2) Road Authority(RA)
  - Mr.Paul J Kulemeka Chief Executive Officer
  - Mr.Placid Kasakatira Director of Planning and Design
  - Mr.Benjamin C Kapoteza Director of Construction
  - Mr.Adrian Mthini Director of Maintenance
  - Mr.Wi Chihana Construction Engineer
  - Mr.Okendeni Kondowe Senior Engineer
  - Mr.Peter Makwinja Environmental Planner
  - Mr.Francis Dimu RDM Engineer
- < Regional Office-North >
  - Mr.Mac Leod Phiri Regional Engineer-North
  - Mr.Dominic Mwafulirwa Maintenance Engineer-North
  - Mr.T Muwasinga Road Engineer
- (3) Environmental Affairs Department (EAD)
  - Ms.Juwo Sibale Environmental Officer
- (4) Department of Energy Affairs
  - Mr.Lewis B. Mhango Chief Energy Officer
- (5) Malawi Energy Regulatory Authority(MERA)
  - Mr.Welton D.Saiwa Director of Energy
  - Mr.Wilfred Z.Kasakula Senior Engineer
- (6) Ministry of Finance
  - Mr.Lukes Kalilombe Principal Economist
  - Mr.Davie Wirima Deputy Director
- (7) African Development Bank (AfDB)
  - Mr.Benson B.Nkhoma Infrastructure Specialist
- (8) Roads Fund Administration (RFD)
  - Mr.Francis Haiya Head of Audit
  - Mr.Ezra Dzoole Company Secretary
- (9) Department of Mines
  - Mr.Ellason S. Kaseko Director of Mines
- (10) Embassy of Japan
  - Mr.Shinichi Ogawa First Secretary
  - Mr.Hiroshi Matsumoto Deputy Chief
  - Ms.Takako Mitsumori Researcher
- (11) JICA Malawi Office
  - Mr.Shinji Obuchi Resident Representative
  - Mr.Akihiko Hoshino Deputy Resident Representative
  - Mr.Shunsuke Takato Assistant Resident Representative
  - Mr.Daisuke Saito Assistant Resident Representative
  - Kapalamula Godfrey Senior Programme Officer

(1) Field Survey

**MINUTES OF DISCUSSIONS  
ON THE PREPARATORY SURVEY  
ON THE PROJECT FOR REPLACEMENT OF SOUTH RUKURU BRIDGE  
ON THE MAIN ROAD M001  
IN THE REPUBLIC OF MALAWI**

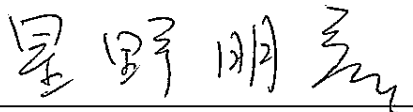
Based on the results of the Preliminary Study, the Government of Japan decided to conduct a Preparatory Survey on the Project for Replacement of South Rukuru Bridge on the Main Road M001 (hereinafter referred to as “the Project”) and entrusted the survey to Japan International Cooperation Agency (hereinafter referred to as “JICA”).

JICA sent to the Republic of Malawi (hereinafter referred to as “Malawi”) the Preparatory Survey Team for the Field Survey (hereinafter referred to as “the Team”), which is headed by Mr. Akihiko Hoshino, Deputy Resident Representative of JICA Malawi Office, and is scheduled to stay in the country from February 23<sup>rd</sup>, 2009 to April 14<sup>th</sup>, 2009.

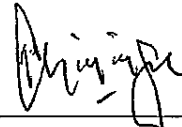
The Team held discussions with the officials concerned of the Government of Malawi and conducted a field survey at the Project site.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

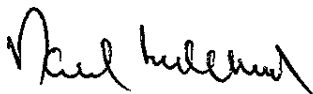
Lilongwe, March 11, 2009




Akihiko Hoshino  
Leader  
Preparatory Survey Team  
Japan International Cooperation Agency



Francis B. Chinsinga  
Principal Secretary 1  
Ministry of Transport and Public Works  
The Republic of Malawi



Paul J. Kulemeka  
Chief Executive Officer  
Roads Authority  
The Republic of Malawi



Randson P. Mwadiwa  
Secretary to the Treasury  
Ministry of Finance  
The Republic of Malawi

## ATTACHMENT

### 1. Project Title

Both sides agreed that the title of the Project is “The Project for Replacement of South Rukuru Bridge on the Main Road M001”.

### 2. Objective of the Project

The objective of the Project is to improve the smooth flow and safety of transport on the Main Road M001 through the replacement of the South Rukuru Bridge.

### 3. Project Site

The South Rukuru Bridge is in Rumphu District (Northern Malawi) and is on the Bwengu – Chiweta section of the Main Road M001. The site of the Project is shown in Annex-1.

### 4. Responsible and Implementing Organizations

4-1.The responsible Ministry of the Project is the Ministry of Transport and Public Works. The organization chart of the responsible Ministry is shown in Annex-2.

4-2.The implementing organization of the Project is the Roads Authority. The organization chart of the implementing organization is shown in Annex-3.

### 5. Items requested by the Government of Malawi

After discussions with the Team, both sides confirmed that the items requested by the Malawian side are as follows;

#### 5-1.Components

- Construction of reinforced concrete bridge with double lane
- Bank protection
- Construction of approach roads
- Pedestrian walkway
- Removal of stones and driftwoods before the construction

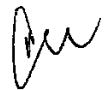
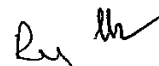
#### 5-2.Technical matters

5-2-1.Both sides agreed that the Japanese side is responsible for removal of stones and driftwoods at the proposed bridge construction area before commencement of construction.

5-2-2.Both sides agreed that the location of the new bridge is downstream by approximately 15 to 20m from the existing bridge

5-2-3.Both sides agreed that the vertical height of the new bridge is approximately 2m

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higher than the height of the existing bridge  
5-2-4.Lay-bys at the side of the new access road

Details of the location and contents of design are shown in Annex-4.

JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

## 6. Japan's Grant Aid Scheme

6-1.The Malawian side understands the Japan's Grant Aid Scheme and necessary measures to be taken by the Government of Malawi. The Team explained the procedures for the Project described in Annex-5.

6-2.The Malawian side will take the necessary measures, as described in Annex-6, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

## 7. JICA Guidelines for Environmental and Social Considerations

7-1.Malawian side recognized that the current JICA Guidelines for Environmental and Social Considerations (2004) and Malawi EIA Guidelines (1997) would be applied in order to ensure that the Project meets environmental and social considerations even though JICA is still formulating new Guidelines.

7-2. The Malawian side agreed to get basic agreement from the Project Affected Persons (PAPs) including land owners regarding the Project, and to arrange the budget allocation for land acquisition, resettlement and compensation for PAPs before August, 2009, in case any PAPs would be identified at the Project site.

7-3. In terms of the environmental consideration process required by Environmental Affairs Department (EAD), both sides agreed that the Malawian side is responsible for final permission from National Environmental Committee of this Project before the end of August, 2009 subject to submission of EIA report by the end of April, 2009.

## 8. Schedule of the Study

8-1.The Team will proceed with further studies in Malawi until April 14<sup>th</sup>, 2009.

8-2.JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around August, 2009.

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8-3.If the contents of the report are accepted in principle by the Government of Malawi, JICA will complete the final report and send it to the Government of Malawi by December, 2009.

9. Other Relevant Issues

9-1.Both sides agreed that the Malawian side shall secure the land necessary for the Project in due course as stipulated in the Land Acquisition Act of Malawi by the end of August, 2009.

9-2.Both sides agreed that the following undertakings shall be taken by the Malawian side at their own expenses;

- Budget allocation for the tax exemption of imported materials,
- To secure temporary yard(s),
- To facilitate access to borrow pit(s) and quarry site(s),
- To facilitate access to site(s) for waste disposal,
- To maintain the security in the Project area including police patrol,
- To maintain the timber deck of the existing bridge in good condition during construction of the new bridge,
- To be responsible for maintenance of the completed bridge, and
- To dismantle the existing timber bridge and remove piers immediately after completion of the new bridge.

9-3.The Malawian side shall secure enough budget and personnel necessary for the operation and maintenance of the facilities implemented by the Project, including the periodical maintenance work after the completion of the Project.

9-4.The Team raised the concerns that the river condition at the Project site might be affected by Lower Fufu Hydropower Project.

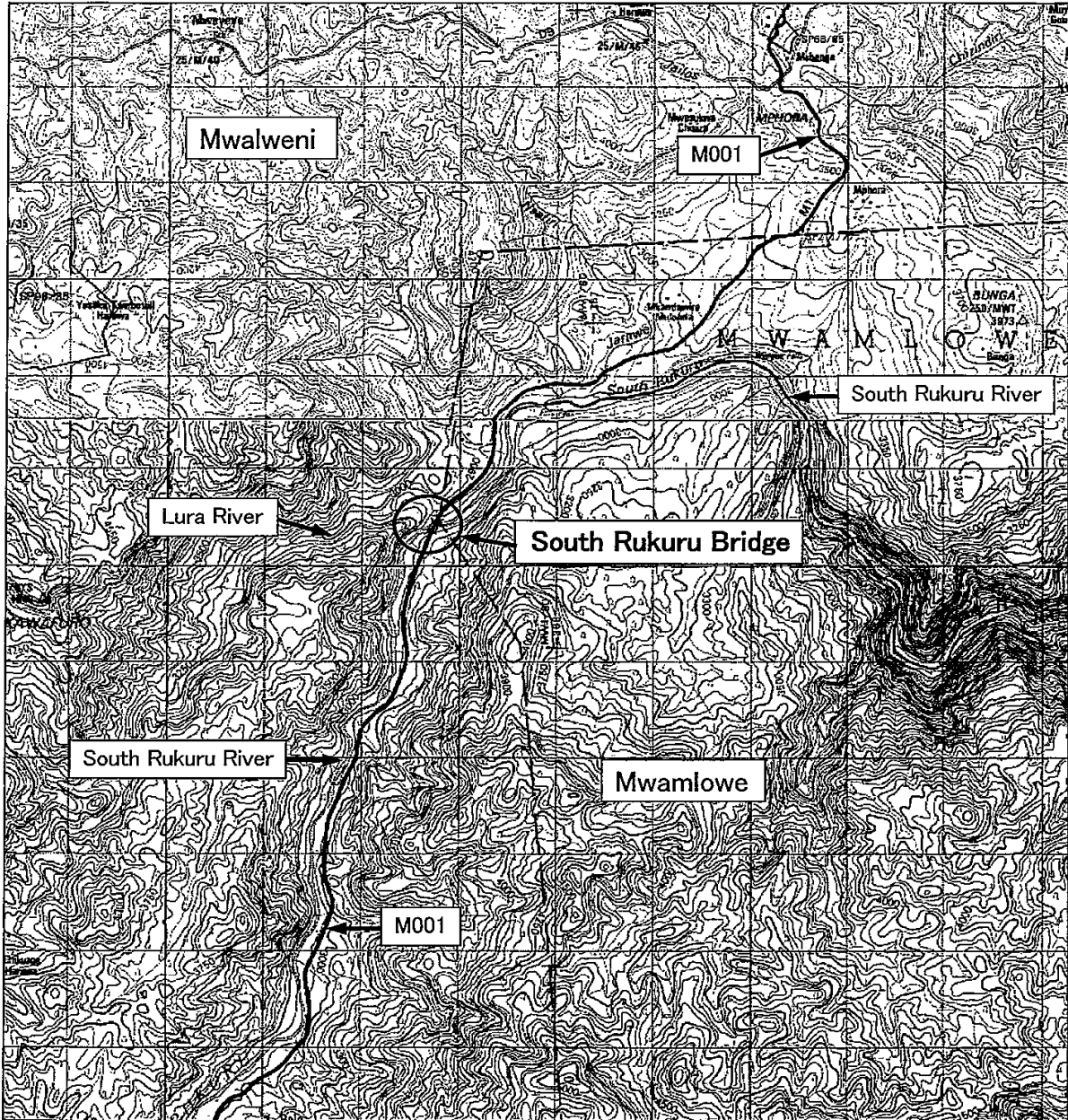
The Malawian side will take necessary measures for Lower Fufu Hydropower Project in order to avoid the negative impact on the Project.

The Malawian side confirmed that the maximum water supply level is 838 meters.

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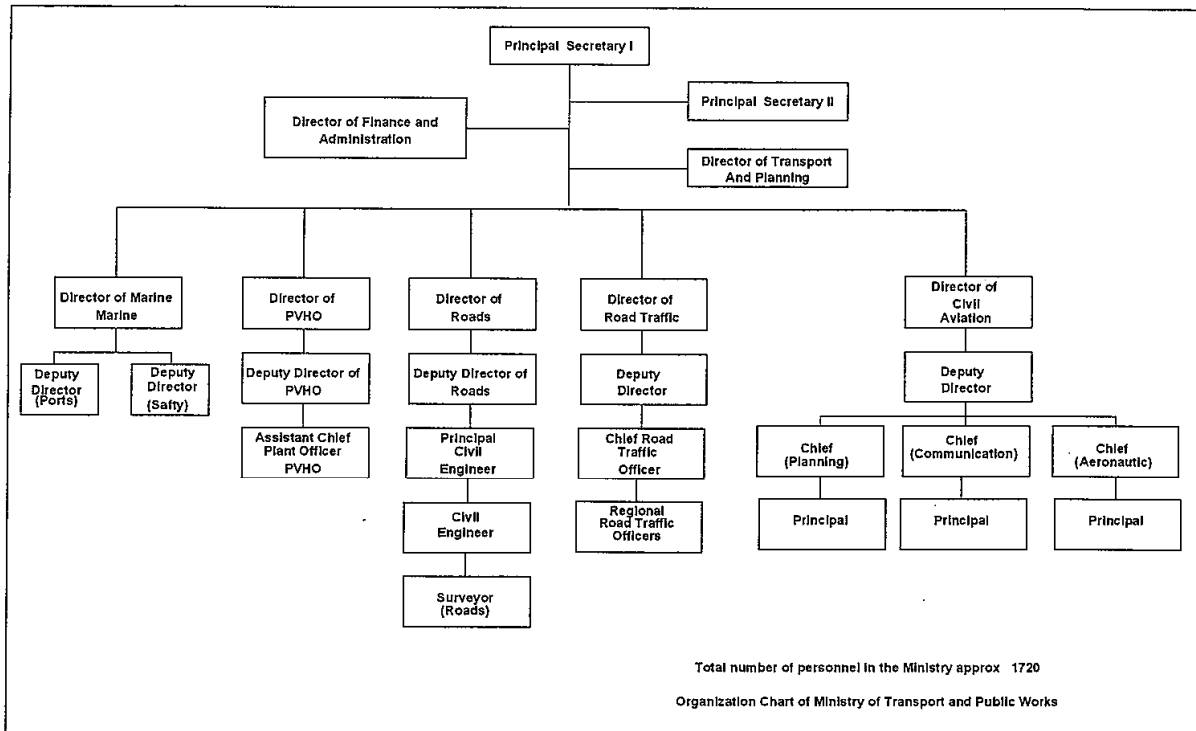
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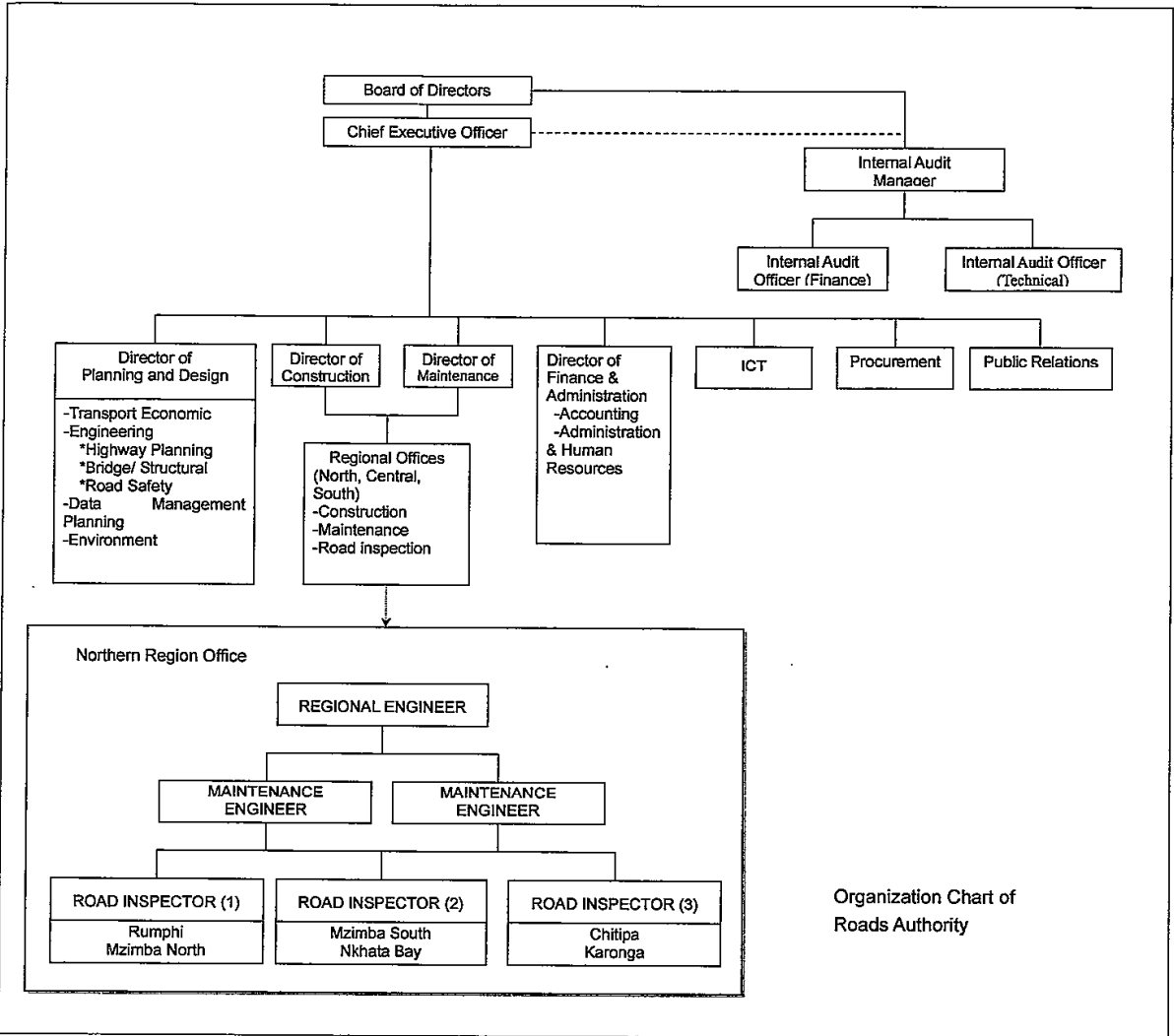


Project Site

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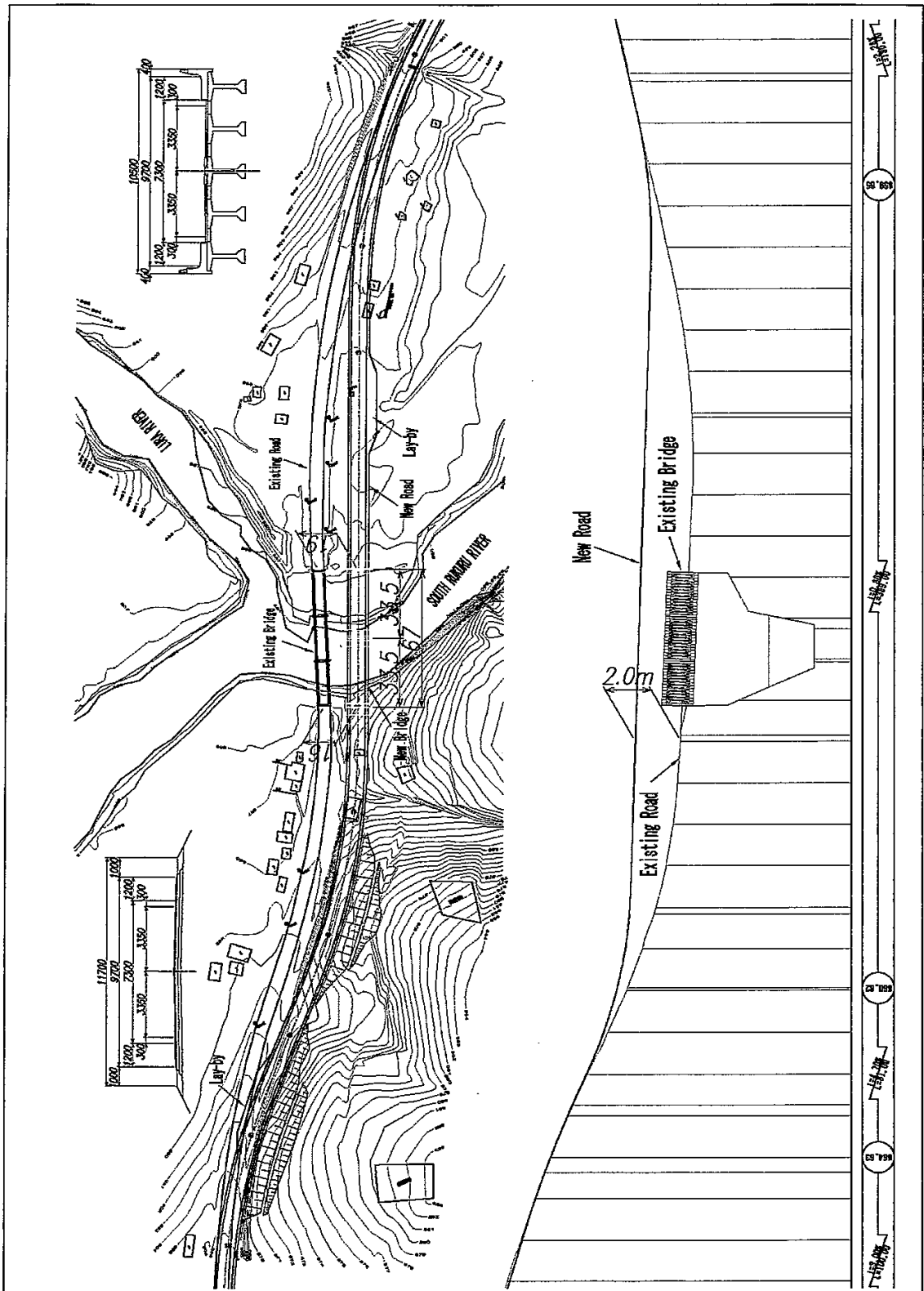


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Organization Chart of Roads Authority

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Revised

## JAPAN'S GRANT AID

The Grant Aid provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

### 1. Grant Aid Procedures

Japan's Grant Aid scheme is executed through the following procedures:

Survey	(Preparatory Survey (hereinafter referred to as "the Survey) conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan (hereinafter referred to as "the GOJ"), and Approval by the Cabinet)
Determination of Implementation	(The Notes exchanged between the GOJ and a recipient country)
Implementation	(Implementation on the basis of the Grant Agreement (hereinafter referred to as "the G/A") concluded between JICA and a recipient country)

Firstly, JICA conducts the Survey using (a) Japanese consulting firm(s).

Secondly, the GOJ appraises the project to see whether or not it is suitable for Japan's Grant Aid Scheme, based on the Survey report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Thirdly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes (hereinafter referred to as "the E/N") signed by the GOJ and the recipient country.

Finally, for the implementation of the project, JICA and the Government of the recipient country conclude the G/A to make payment of the grant and assist in such matters as preparing tenders, contracts and so on.

### 2. Preparatory Survey

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be signed between the GOJ and the Government of the recipient country to make a plea for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Eligible source country

Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(3) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(4) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex-6

(5) "Proper Use"

The Government of recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(6) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(7) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an

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account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

- b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(8) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

(9) Social and Environmental Considerations

The recipient country must ensure the social and environmental considerations for the Project and must follow the environmental regulation of the recipient country and JICA socio-environmental guideline

(End)

## Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	Relocation, improvement and/or repair of existing utilities(power lines, telecommunication lines, water lines, etc.), if necessary		●
4	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
5	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project	●	
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
8	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
9	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)



(2) Explanation of the Draft Outline Design

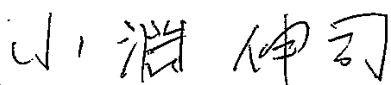
**MINUTES OF DISCUSSIONS  
ON THE BASIC DESIGN STUDY  
ON THE PROJECT FOR REPLACEMENT OF SOUTH RUKURU BRIDGE  
ON THE MAIN ROAD M001  
IN THE REPUBLIC OF MALAWI  
(Explanation on Draft Basic Design Report)**

From February to April 2009, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Basic Design Study Team on the "Project for Replacement of South Rukuru Bridge on the Main Road M001" (hereinafter referred to as "the Project") to the Republic of Malawi (hereinafter referred to as "Malawi"), and through discussions with Malawi side, field survey, and technical examination of the results in Japan, JICA prepared the draft basic design report of the study.

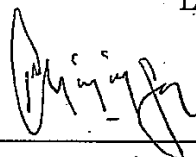
In order to explain and to consult with the officials concerned of the Government of Malawi on the components of the draft report, JICA sent to Malawi the Basic Design Explanation Team (hereinafter referred to as "the Team"), headed by Mr. Shinji Obuchi, Chief Representative, JICA Malawi Office, from August 7 to 12, 2009.

As a result of discussions, both sides confirmed the main items described in the attached sheets.

Lilongwe, August 12, 2009



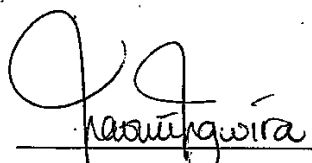
Shinji Obuchi  
Leader  
Basic Design Explanation Team  
Japan International Cooperation Agency



Francis B. Chinsinga  
Principal Secretary I  
Ministry of Transport and Public Infrastructure  
The Republic of Malawi



Paul J. Kulemeka  
Chief Executive Officer  
Roads Authority  
The Republic of Malawi



Dr. Naomi Ngwira  
Director for Debt and Aid  
Ministry of Finance  
The Republic of Malawi

## ATTACHMENT

### 1. Components of the Draft Report

The Malawian side agreed and accepted in principle the components of the draft report of the Basic Design Study explained by the Team. As the result of the Study, the proposed alignment of the new South Rukuru Bridge is shown in Annex-1.

### 2. Japan's Grant Aid scheme

Malawian side understood the Japan's Grant Aid scheme and the necessary measures to be taken by the Government of Malawi as described in Minutes of Discussions signed on March 11, 2009.

### 3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Malawi by the end of December, 2009.

### 4. Cost Estimation

Both sides agreed that the Project Cost Estimation as attached in Annex-2 should never be duplicated or released to any third parties before the signing of all the Contract(s) for the Project.

### 5. Other Relevant Issues

5-1. The Team confirmed that the Malawian side will hold the National Council for the Environment meeting, which is the final board for the endorsement of the Environmental Impact Assessment (EIA), and get EIA certificate by the end of August, 2009. As soon as the certificate is issued, it should be sent to the Embassy of Japan/JICA Malawi office.

5-2. Both sides agreed that the Malawian side will arrange the budget allocation for land

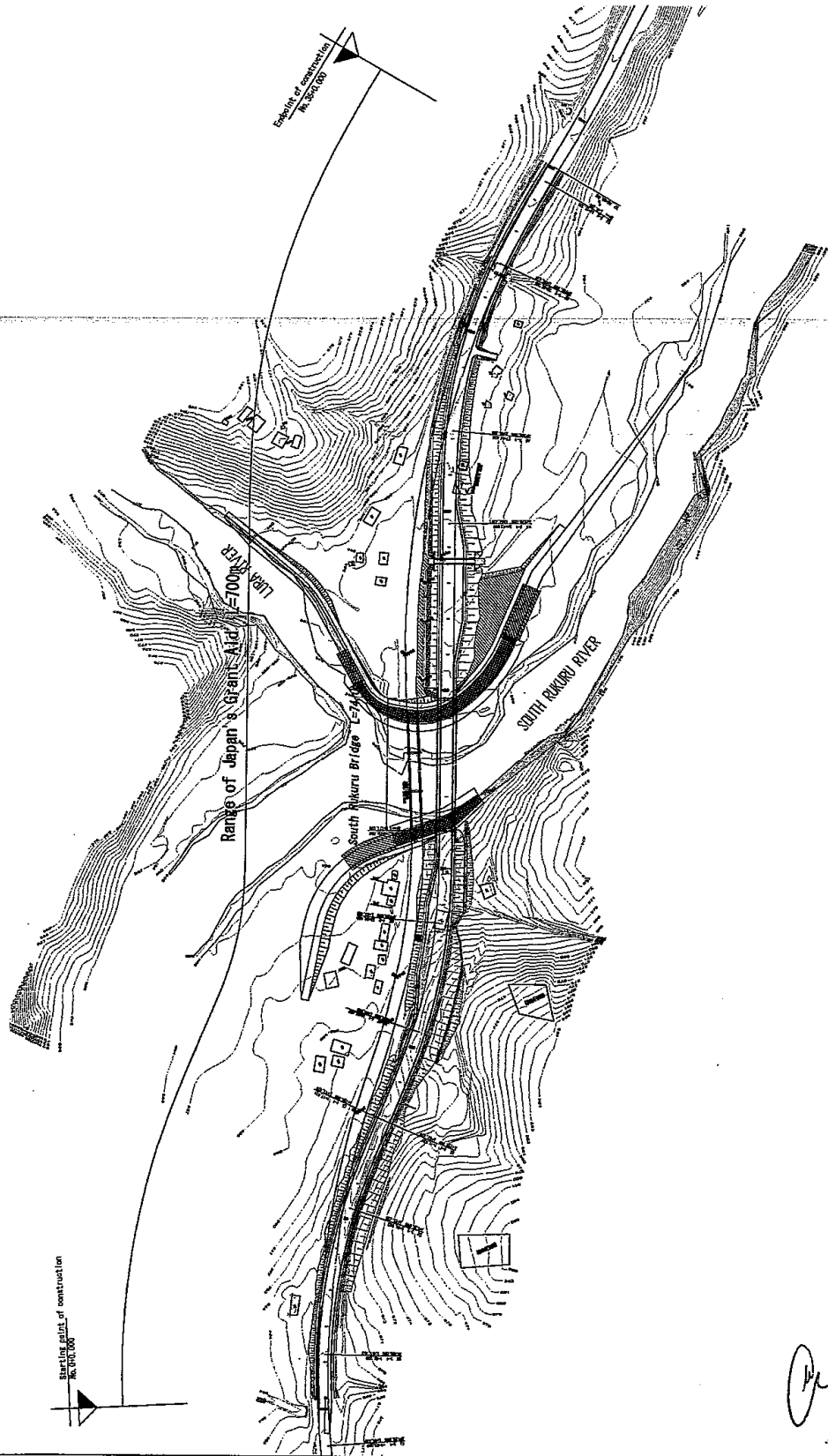
acquisition and clearance of related housing and compensation for the Project Affected Persons (PAPs) right after getting the EIA certificate.

5-3. Both sides agreed that the Malawian side shall obtain basic agreement signed by the PAPs by the end of August, 2009. As soon as the agreement is obtained, it should be sent to the Embassy of Japan/JICA Malawi office

5-4. Malawian side confirmed to implement the necessary work taken by the Malawian side at their own expenses based on the Minutes of Discussions signed on March 11, 2009.

- Annex-1 Draft final alignment of South Rukuru Bridge
- Annex-2 Project Cost Estimation
- Annex-3 Environmental Checklist

Draft final alignment of South Rukuru Bridge



Environmental Checklist

Annex-3

Environmental Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
1 Permits and Explanation	(1) EIA and Environmental Permits	<ul style="list-style-type: none"> <li>① Have EIA reports been officially completed?</li> <li>② Have EIA reports been approved by authorities of the host country's government?</li> <li>③ Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?</li> <li>④ In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?</li> </ul>	<ul style="list-style-type: none"> <li>① The EIA report has been completed.</li> <li>② The EIA report was submitted to Environmental Affairs Department (EAD) on June 22, 2009. EAD held the Technical Committee on the Environment (TCE) on July 3, 2009. Based on the results of the TCE, the revised EIA report was submitted to EAD on August 4, 2009. If the report is endorsed by the National Council for the Environment, the certificate will be issued by the end of August, 2009.</li> <li>③ The licence of quarrying sites and borrow pits should be obtained from Ministry of Mines, Energy and Environment by the Contractor after an EIA certificate is issued.</li> </ul>
	(2) Explanation to the Public	<ul style="list-style-type: none"> <li>① Are contents of the project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public?</li> <li>② Are proper responses made to comments from the public and regulatory authorities?</li> </ul>	<ul style="list-style-type: none"> <li>① The public consultation was conducted at the preliminary study stage in September 2008. The general agreement of the local people have been obtained. Under the EIA report review, the report will be opened to the public.</li> <li>② The interview survey to the local people was conducted at the preparatory study stage in March 2009. The results were reflected in the mitigation.</li> </ul>
2 Mitigation Measures	(1) Air Quality	<ul style="list-style-type: none"> <li>① Is there a possibility that air pollutants emitted from various sources, such as vehicle traffic will affect ambient air quality? Does ambient air quality comply with the country's ambient air quality standards?</li> <li>② Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse?</li> </ul>	<ul style="list-style-type: none"> <li>① The project site was located in mountain region far from urban area. Serious air pollution will not occur because of the limited traffic volume.</li> </ul>
	(2) Water Quality	<ul style="list-style-type: none"> <li>① Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas?</li> <li>② Is there a possibility that surface-runoff from roads will contaminate water sources, such as groundwater?</li> <li>③ Do effluents from various facilities, such as stations and parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas that do not comply with the country's ambient water quality standards?</li> </ul>	<ul style="list-style-type: none"> <li>① Turbid water will generate in the construction works. There are no intake facilities in and down the site.</li> <li>② Impact on water resources of runoff from road surface will not occur.</li> <li>③ Effluent from parking areas will comply with the effluent standards.</li> </ul>
	(3) Noise and Vibration	<ul style="list-style-type: none"> <li>① Do noise and vibrations from vehicle and train traffic comply with the country's standards?</li> </ul>	<ul style="list-style-type: none"> <li>① Serious noise and vibration will not occur because of the limited traffic volume.</li> </ul>
3 Natural Environment	(1) Protected Areas	<ul style="list-style-type: none"> <li>① Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?</li> </ul>	<ul style="list-style-type: none"> <li>① There are no protected areas in and around the site.</li> </ul>

Environmental Checklist

Annex-3

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
3 Natural Environment	(2) Ecosystem	<p>① Does the project site encompass primary forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?</p> <p>② Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?</p> <p>③ If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?</p> <p>④ Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock?</p> <p>⑤ Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered?</p> <p>⑥ In cases where the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments?</p>	<p>① There are no ecological valuable habitats in and around the site.</p> <p>② The habitats of endangered species have not been identified in and down the site.</p> <p>③ Significant ecological impact will not occur.</p> <p>④ Migration fish species running up through the site have not been identified.</p> <p>⑤⑥ The new bridge will not cause destruction of forest and poaching because of reconstruction of existing bridge.</p>
	(3) Hydrology	<p>① Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows?</p>	<p>① Impact on surface and ground water will not occur.</p>
	(4) Topography and Geology	<p>① Is there a soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed?</p> <p>② Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides?</p> <p>③ Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?</p>	<p>①② There are no slope failures or landslides in and around the site.</p> <p>③ Serious soil runoff will not occur.</p>

Environmental Checklist

Annex-3

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
<p>4 Social Environment</p>	(1) Resettlement	<p>① Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>② Is adequate explanation on relocation and compensation given to affected persons prior to resettlement?</p> <p>③ Is the resettlement plan, including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>④ Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>⑤ Are agreements with the affected persons obtained prior to resettlement?</p> <p>⑥ Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>⑦ Is a plan developed to monitor the impacts of resettlement?</p>	<p>① Removal of total four houses or barns without residents will be required.</p> <p>② The local government have conducted the explanation to the local people and estimation of the compensation.</p> <p>③ Shops and vendors around existing bridge will be able to continue their business after the completion.</p> <p>④⑤⑥⑦ Any resettlement will not be required. The local government will negotiate with the owners of houses, barns, agricultural land and trees that are objects for monetary compensation.</p>
	(2) Living and Livelihood	<p>① Where roads or railways are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts?</p> <p>② Is there a possibility that the project will adversely affect the living conditions of inhabitants other than the affected inhabitants? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>③ Is there a possibility that diseases, including communicable diseases, such as HIV will be introduced due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p> <p>④ Is there a possibility that the project will adversely affect road traffic in the surrounding areas (e.g., by causing increases in traffic congestion and traffic accidents)?</p> <p>⑤ Is there a possibility that roads and railways will cause impede the movement of inhabitants?</p> <p>⑥ Is there a possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference?</p>	<p>①②③④⑤ The new bridge will not cause significant impacts on livelihood of the local people and road traffic because of reconstruction of existing bridge. Shops and vendors around existing bridge will be able to continue their business after the completion.</p> <p>⑥ Impact on sun shading and radio interference will not occur.</p>
	(3) Heritage	<p>① Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?</p>	<p>① There are no heritage in and around the site.</p>
	(4) Landscape	<p>① Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?</p>	<p>① There are no special landscape areas in and around the site.</p>

Environmental Checklist

Annex-3

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
4 Social Environment	(5) Ethnic Minorities and Indigenous Peoples	<p>① Where ethnic minorities and indigenous peoples are living in the rights-of-way, are considerations given to reduce the impacts on culture and lifestyle of ethnic minorities and indigenous peoples?</p> <p>② Does the project comply with the country's laws for rights of ethnic minorities and indigenous peoples?</p>	<p>①② The site is not area where ethnic minorities and indigenous people having unique culture and lifestyle are living</p>
	(1) Impacts during Construction	<p>① Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>② If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>③ If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p> <p>④ If necessary, is health and safety education (e.g., traffic safety, public health) provided for project personnel, including workers?</p>	<p>①②③④ To mitigate environmental impacts during construction phase, the environmental management plan (EMP) is formulated in the EIA report. The contractor should practice the EMP.</p>
5 Others	(2) Monitoring	<p>① Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>② Are the items, methods and frequencies included in the monitoring program judged to be appropriate?</p> <p>③ Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>④ Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>①②③④ To manage environmental impacts during construction phase, the environmental monitoring plan is formulated in the EIA report. The supervision consultant should establish the monitoring plan.</p>
6 Note	Reference to Checklist of Other Sectors	<p>① Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation).</p> <p>② Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).</p>	
	Note on Using Environmental Checklist	<p>① If necessary, the impacts to transboundary or global issues should be confirmed, if necessary (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).</p>	

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are made, if necessary.

2) In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience). Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.



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Website: www.nramw.com

Ref No.: FIM/13/9

17<sup>th</sup> August 2009

The Leader  
Basic Design Explanation Team  
Japan International Cooperation Agency  
Japan/Malawi Office

Copy: The Secretary for Transport and Public Infrastructure  
Ministry of Transport and Public Infrastructure  
Capital Hill  
Lilongwe

Attention: The Director of Roads

The Director  
Environmental Affairs Department  
City Centre  
Lilongwe

Dear Sir

**Project Affected Persons (PAPS) report under the proposed South Rukuru bridge on M1 in Rumphi District**

In line with the Minutes of Discussions on the basic design study on the project for replacement of South Rukuru Bridge on the main road M1 in the Republic of Malawi (Explanation on Draft Basic Design Report), item 5-3 under the attachment, we are please to submit the attached PAPS basic agreement to the project.

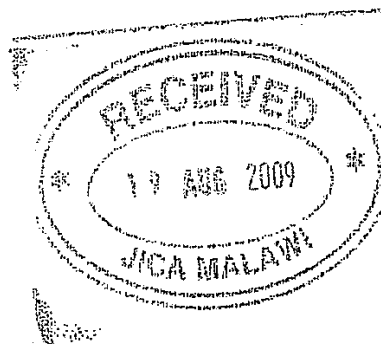
It is hoped that you will find this in order.

Yours faithfully,

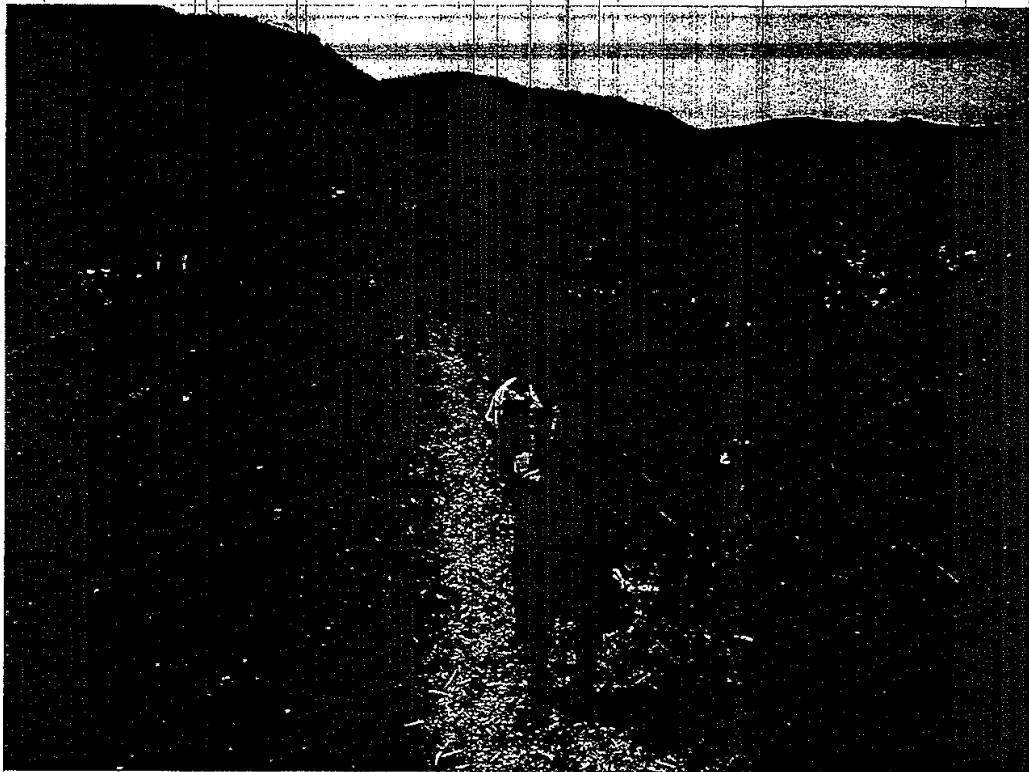
Eng Paul J Kulemeka  
Chief Executive officer

Encl

PCK/pck/cpm



**Additional ESIA Process on the proposed South Rukuru Bridge  
Project in Rumphu District**



**Report on Public Disclosure and Endorsement of the Proposed Project by  
Project Affected Persons (PAPS) as per meetings held on the 13<sup>th</sup> and 14<sup>th</sup>.  
August 2009**

August, 2009

## 1.0 Introduction

It is a requirement by law under the Environmental Management Act 1996 that new bridge construction projects require a full EIA study to enhance positive impacts and avoid and mitigate negative impacts to ensure sound sustainable environmental management of the surrounding environment.

It was against this background that the Environmental and Social Management unit in the Department of Planning and development carried out the Public Disclosure as part of the ESIA study report that the Roads Authority has prepared through Henderson and Partners.

## 2.0 ESIA Disclosure

The Roads Authority Environmental Specialist informed the gathering that the study commissioned identified the following adverse impacts:

- **Soil erosion** – due to the re-alignment of the bridge and approach roads
- **Water resources degradation** – with respect to quality and reduced quantities due to usage in the construction purposes
- **Land degradation** – due to possible brick making sand excavation, excavating of borrow sites and quarry establishment
- **Disturbance of natural ecosystems** – during site clearing which will result in cutting of trees, soil cutting and filling during construction of the approach roads
- **Noise pollution and Vibration** – due to heavy plant and vehicles to be used on site
- **Air pollution from dust and particulate matter** - from exhaust fumes and earthworks
- **Water contamination** – due to possible poor waste management and spillage of oils and other solvents to be used on the project
- **Accident-** vehicular, health and safety accidents during the construction works
- **Relocation and resettlement** - of project affected persons (PAPS)
- **Increased transmission of Sexual Transmitted Infections-** due to the influx of migrant and construction workers

- **Loss of business opportunities** - due to the re-alignment of the road and the bridge, demolition of the trading centres buildings and resettlement elsewhere
- **Cultural disruption** – due to the advent of foreign workers in the area
- **Increase in traffic accidents** - after commissioning the bridge and road.

The Roads Authority Environmental Specialist informed the gatherings that the ESIA study had identified mitigation measures to avoid and mitigate the negative impacts outlined above. The measures include, but not limited to:

- Designing and constructing the road in such a way to prevent unwarranted cutting and filling operations
- Management of water resources by ensuring that hazardous and non biodegradable substances are properly disposed of and not throwing/ draining them into the two rivers (South Rukuru and Lura)
- Air pollution from dust will be controlled and checked by water spraying as a palliative measure; while particulate matter will be addressed by charging the contractor to constantly service the plant and vehicles being used at site
- Water contamination will be checked by water quality monitoring and enforcement of waste management practices that do not allow dumping of hazardous, degradable and non degradable materials in use at the site
- Vehicular accidents will be reduced by proper signage and use of rumble surfaces on both sides of the bridge
- In case of business opportunities loss, the design has provided for two lay - byes around which chiefs and the local assembly will relocate the business structures to be demolished and thus maintaining or even improving the livelihoods of the PAPS relocated and the area as a whole
- Cultural disruption- chiefs and the contractor's management will create the necessary awareness on HIV/AIDS and STIs transmission with the help of Health Surveillance Assistants in the area and Medical personnel from Rumph District and Phwezi Foundation.

### 3.0 PAPS Feedback and Endorsement

Outlined below are issues that transpired during the meetings:

### **3.1 Project endorsement**

The community member unanimously accepted the project with the following caveats:

- What would happen to their crops and properties to be demolished or trees cut down during the bridge road construction?
- Just next to the new bridge there is a road to Mledzi which is very crucial for sustainable livelihoods in the area, what has government in mind to address this?
- The community observed that a lot of accident occur due to the curves into the bridge and asked the designers to smoothen the curve to avoid such accidents.
- The members noted that some villagers' property had not been recorded and this may leave them uncompensated.
- There are two grave in the area, just adjacent to the proposed road to the bridge from the southern side. What would happen to them?
- The chiefs finally asked members from the Rumphi District Assembly to take the compensation matter seriously and compensate the PAPS ensuring that their livelihoods are not only maintained but even enhanced.

In response, members from the Rumphi District Assembly explained to the gathering procedures that are used when it comes to getting at compensation values. They informed the gathering that they will be starting the exercise on Monday the 17<sup>th</sup> of August and will do the exercise with the Group Village Headmen and the PAPS to ensure transparency and accountability.

For the Junction to Mledzi, and bridge design to reduce accidents, the Environmental Specialist informed the gathering that their concerns had been taken care of and were included in the design of the bridge and the approach roads.

With regard the graves, it was established, after traversing the road boundary that they were located outside the road reserve of the proposed approach road to the bridge and thus posed no threat to this project.

### **3.2 PAPS Project Endorsement**

The PAPS endorsed the project and asked Government to speed up the project. Their signatures and photos are in Annexes 1&2.

## **Annex 1: Signatures and Endorsements**

FEMALES.

Public Disclosure of the Proposed South Rukuru Bridge in Rumphi District to be constructed by JICA

Name	Address	Signature	Remarks	Date
Annie Gonduse	Bale FP School P/B1 Mzokoto, Rumphi.	A. Gonduse	Nkhuzo melezga	13/08/09
Maina Mhoni	Bale FP School P/B1 Mzokoto, Rumphi.	M. Mhoni	Nkhuzo melezga	13/08/09
Annie chisiza	Bale kamelezi FP SC hoel P/B1 Mzokoto	A. Chisiza	Nkhuzo melezga	13/08/09
Fidzenukhonjere	Bale FP School P/B1 Mzokoto, Rumphi.	F. Nkhonjere	Nkhuzo melezga	13/08/09
Myclosusantika	Bale FP School P/B1 Mzokoto, Rumphi.	M. Msiska	Nkhuzo melezga	13/08/09
Quena Khumwenda	Bale FP School P/B1 Mzokoto, Rumphi.	Q. Khumwenda	Nkhuzo melezga	13/08/09
Iness Hara wa	" " " " " "	I. Hara wa	Nkhuzo melezga	13/08/09
Mary Msiska	" " " " " "	Mary	Nkhuzo melezga	13/08/09
Ditiwezia	chi ngami		Nkhuzo melezga	13/08/09

MALES.

Public Disclosure of the Proposed South Rukuru Bridge in Rumphi District to be constructed by JICA

	Name	Address	Signature	Remarks	Date
1	Sinthani Manda	0884091636	<i>[Signature]</i>	Accept	13/08/09
2	Ephraim Msiska	P/Bag 1 Bale	E. M. Sika	Accept	13/08/09
3	Khisim Msiska	0884237906	<i>[Signature]</i>	Accept	13/08/09
4	Samuel Mbale	P/Bag 1 Bale	S. Mbale	Accept	13/08/09
5	Petres Mubila	P/Bag 1 Bale	P. Mubila	Accept	13/08/09
6	Vincent Msiska	P/Bag 1 Bale	V. Msiska	Accept	13/08/09
7	David Chisiss	0884934389	<i>[Signature]</i>	Accept	13/08/09
8	William Mbandawire	<del>08849345123</del>	<i>[Signature]</i>	Accept	13/08/09
9	Alex Nzirang	088448781	Alex nyumba	Accept	13/08/09
10	Lucky Mbandawire	P/Bag 1 Bale	L. Mbandawire	Accept	13/08/09
11	Samson M. Msiska	P/Bag 1 Bale	Samson M.	Accept	13/08/09
12	Aaron Sichali	P/Bag 1 Bale	A. Sindi	Accept	13/08/09
13	Kepas Chisiss	P/Bag 1 Bale	K. Chisiss	Accept	13/08/09

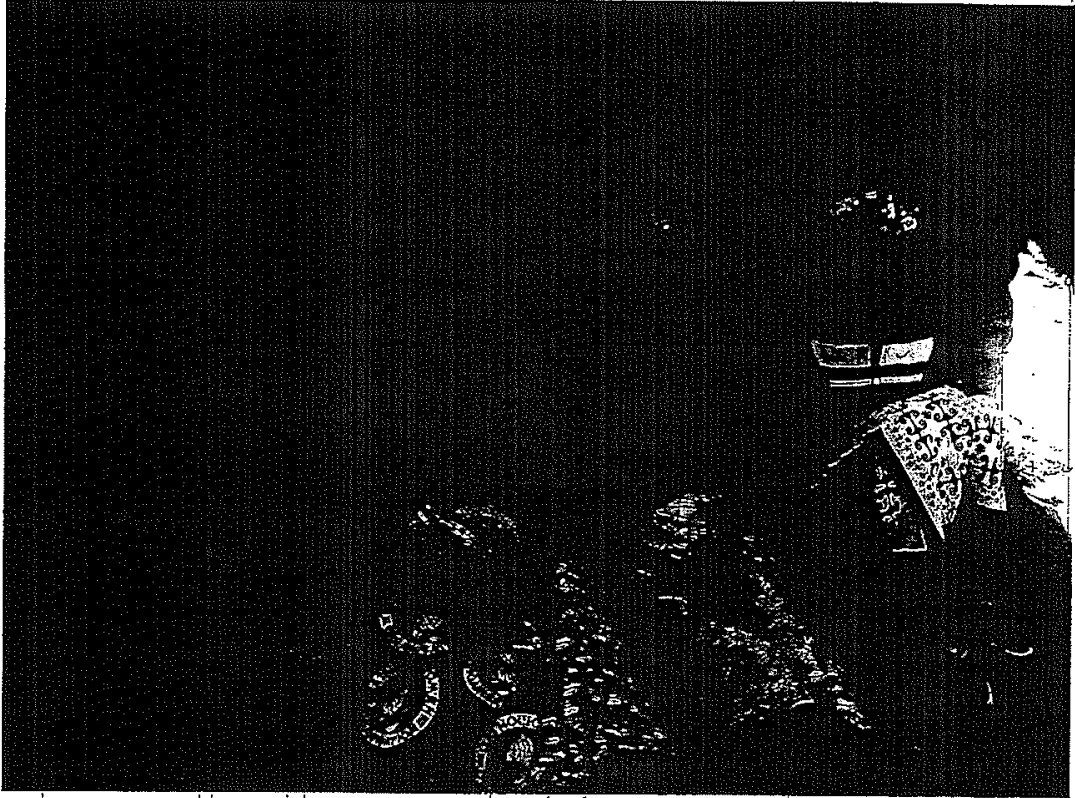




**Annex 2: Photographs for People Consulted**



Picture 1: The Group Village Headman addressing subjects at the meetings



Picture 2: Women at the meetings



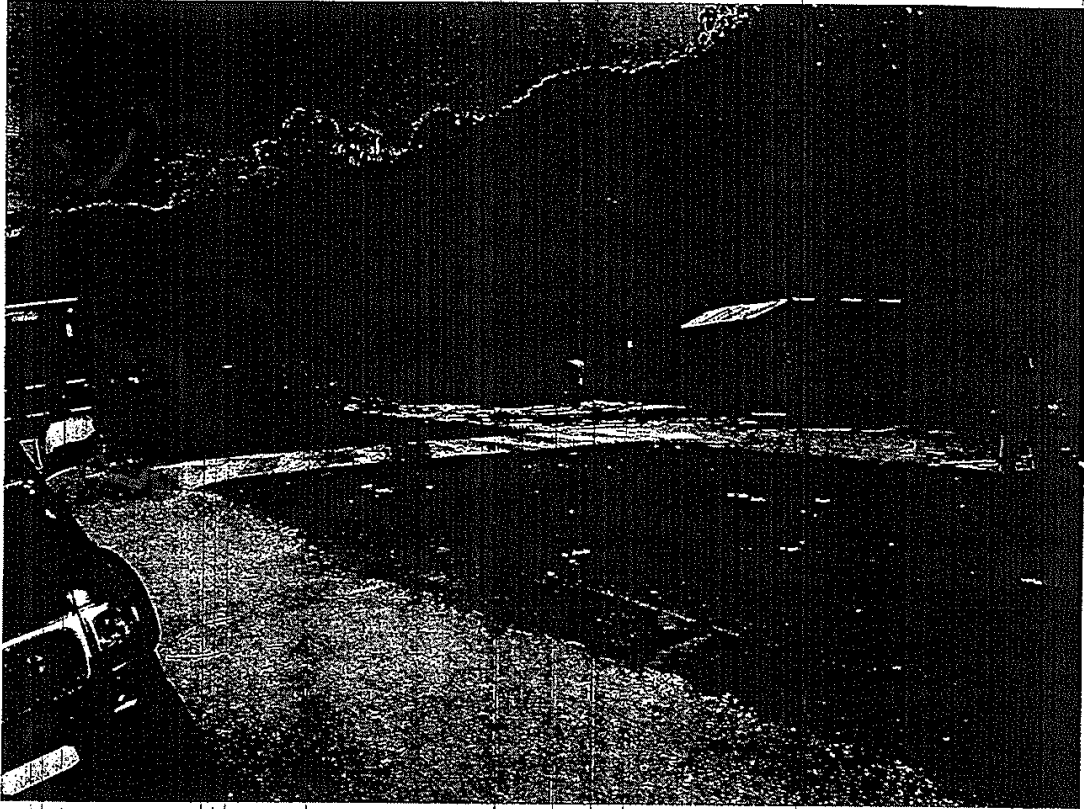
Picture 3: More Female and young participants at the meetings



Picture 4: Some of the Male Participants at the meetings



Picture 5: Vendors selling Foodstuff to Passengers at the project site



Picture 6: Parking on the Road side at the bridge site



Picture 7: Pointing at a grave just outside the Road Reserve



Appendix-6. List of References

NAME OF THE SURVEY : PREPARATORY SURVEY ON THE PROJECT FOR REPLACEMENT OF SOUTH RUKURU BRIDGE ON THE MAIN ROAD NO.1 IN THE REPUBLIC OF MALAWI

No	Title	Form	Original/ Copy	Issued by	Year
1	Annual Economic Report 2008	Book	Copy	Ministry of Economic and Planning and Development	2008
2	MALAWI TRANSPORT COST STUDY	Electronic data	Copy	MOTPI	
3	The Public Sector Investment Program(PSIP)	Book	Copy	Government of Malawi	2008
4	Annual Debt and Aid Report	Book	Copy	Government of Malawi	2008
5	Summary of Project Support Managed Outside Government Systems	Booklet	Copy	Ministry of Finance	2007
6	Budget Summary of MOTPI for 2007/2008 , 2008/2009 , 2009/2010	Booklet	Copy	Government of Malawi	2008
7	Budget Summary for RA for 2006/2007 , 2007/2008 , 2008/2009	Electronic data	Copy	Roads Authority	2009
8	MOTPI Organizational chart	Electronic data	Copy	MOTPI	2009
9	RA Organizational chart	Electronic data	Copy	RA	2009
10	CONCEPT PAPER ON THE LOWER FUFU HYDROELECTRIC PROJECT	Book	Copy	MERA	2008
11	SATCC standard specs and codes of practice	Electronic data	Copy	SATCC	2001
12	Bridge Design Manual	Electronic data	Copy	Ministry of Works and Supplies	1978
13	Highway Design Manual	Electronic data	Copy	Ministry of Works and Supplies	1978
14	ENVIRONMENTAL IMPACT ASSESSMENT DRAGT REPORT	Booklet	Copy	Henderson and partners	2009
15	Environmental and Social Management Guidelines in the Road Sector	Electronic data	Copy	Roads Authority	2007
16	Earthquake data	Electronic data	Copy	Regional Geological Centre	
17	Meteorological data	Electronic data	Copy	MOMS	