

**Belize**  
**Natural Hazards and Disaster Risk Assessment for Improved Road  
Management (TF0A2517) - June 6 to 10, 2016**  
**and**  
**Hazard and Disaster Risk Assessment Framework for Belize:  
Prioritization of an Investment Plan (TF012584)**  
**Implementation Support for Climate Resilient Infrastructure Project  
(P127338) – June 20 to 24, 2016**

**Aide Memoire**

**Introduction**

1. Between June 6 and 10, a World Bank team led by Keren Charles (Disaster Risk Management Specialist – Consultant) and comprised of Stephen Brushett (Lead Transport Specialist – Consultant) and Philip Barutha (Transport Engineer – Consultant) visited Belize to carry out a scoping mission for the Natural Hazards and Disaster Risk Management for Improved Road Management. Frederico Ferreira Pedroso (TTL and Disaster Risk Management Specialist) provided support from Brasilia, Brazil.
2. The main objective of the mission were to (i) define a work plan for the development of the TA by meeting with representatives of the Ministry of Works (MOW); (ii) identify current transport maintenance processes; (iii) conduct site visits with district engineers in the field; and (iv) identify current transport maintenance funding allocation processes.
3. Between June 20 to 24, a World Bank team led by Frederico Ferreira Pedroso (TTL and Disaster Risk Management Specialist) and comprised of Melanie Kappes (Disaster Risk Management Specialist), Bishwa Pandey (Senior Data Management Specialist – Consultant) and Marion Cayetano (National Focal Point – Consultant) visited Belize to carry out a closing workshop for the Multi-Criteria Evaluation (MCE) process that was undertaken as part of the “Hazard and Disaster Risk Assessment Framework for Belize: Prioritization of an Investment Plan” Technical Assistance as well as to conduct supervision activities for the Climate Resilient Infrastructure Project (CRIP). Diana Rubiano Vargas (co-Task Team Leader and Senior Disaster Risk Management Specialist) provided support from Washington.
4. This aide-memoire summarizes the findings, recommendations and agreements reached during the mission and it is subject to confirmation by World Bank management. The aide-memoire will be publicly disclosed once finalized.

**Transport Asset Management (TAM) Technical Assistance**

5. The World Bank Team met with representatives of the Ministry of Economic Development and Petroleum (MEDP), the Ministry of Finance (MOF), the Ministry of Works (MOW) and the Belize Social Investment Fund (BSIF). Additionally, a field visit was carried out to the Cayo District Works Office located in Santa Elena.
6. The mutually agreed concept underlining the TA, which is funded by the ACP-EU and executed by the Bank, is as follows to support building of capacity for sustainable, efficient and effective transport

asset management (TAM) in MOW. In this sense, the TA will aim at helping a systematic internalization of the work carried out in both the preparation and implementation phases of the Climate Resilient Infrastructure Project (CRIP). In the short term, this is expected to cover, *inter alia*: (i) the importation and adaptation of data sets and of multi criteria evaluation (MCE) methodologies; and (ii) the identification of personnel, training and equipment requirements.

7. The team held an extensive full day work session with MOW management and senior officials on June 7, following which a matrix of activities was developed and agreed (Annex 1). The matrix identifies a number of key headers for specific action areas for each of which short term interventions (of approximately one year or less duration), responsible parties, key performance indicators and medium term goals have been identified. A subsequent step will be to define the costs of the short term interventions, determine the source of financing (including the IBRD Loan for CRIP) and to finalize a timeline and key action thresholds based on the draft developed by the team (Annex 2).

8. The team drew specific attention to the following elements of the matrix during its discussions with the ministries and agencies. Firstly, the matrix gives primacy to interventions to improve the regularity and reliability of data collection, including the acquisition of equipment to capture georeferenced data, and to develop data analysis and the quality of reporting which could include the generation of “dashboards” for key government leaders, including the CEO of MOW. Secondly, attention was drawn to the value of establishing a basis for the valuation of the road network, which could assist in building the case for various options for the maintenance of the road network and how this could best be funded. Thirdly, the emphasis was on the benefit of adopting a phased approach to TAM that is: (i) in the short term focusing on a number of discrete, “doable” steps that could improve MOW operations within the current institutional and financing constraints; and (ii) in the medium term deepening the development of a more systematic TAM based on the results achieved in the initial phase.

9. The team was made aware that discussions concerning major institutional reform in the road sector, with particular reference to the creation of a road maintenance fund (RMF), are ongoing but have not yet concluded. The timing and content of the second more systematic stage to the implementation of the TAM needs to be coordinated with decisions to be taken in regard to institutional change. TAM should go forward regardless of when or whether this change occurs, because the size and economic importance of the road network requires that these assets be better managed and maintained. However, should institutional change advance, this would likely create new opportunities and expanded horizons for the maintenance of the road sector which would need to be factored into the TAM. For this reason, the team reiterated the interest of the Bank remaining informed of progress in this regard and being given the chance to contribute its ideas and suggestions. The team emphasized that the Bank has access to a wealth of knowledge and experience, which could be brought to bear on this subject.

10. The team did however identify the potential for improving maintenance management and financing in the short term, through the use of the budget system. In discussions with MOF and MOW, the team was informed that within current regulations that it would be possible to classify road maintenance expenditures as recurrent items. Also, the timing of allocation of financial resources could be managed in such a way to optimize the programming and execution of maintenance works (which is affected by the existence of distinct wet and dry seasons). The team encouraged the parties to work towards using the preparation of the budget for the year 2017/2018 as an opportunity to incorporate some of the proposed changes.

11. Key immediate next steps and tentative timing are set out below. The approach needs to be carefully phased with the idea of building confidence and enhancing knowledge and experience over a time frame which is unlikely to be less than 18 months in duration. There will be need for a formal monitoring process, probably on a monthly basis, in which all key agencies and ministries participate to ensure the timeframe of activities is respected:

- Finalization of the matrix of activities with inclusion of the cost estimates by mid-July;
- Finalization of the timeframe and key thresholds and performance indicators by mid-July;
- Initiation of at least three short term activities by mid-August;
- Initiation of further short term activities by mid-September;
- Follow up Bank mission and updating of short term objectives by mid-October; and
- Start 2017/2018 budget preparation process for road maintenance by mid-October (**depending on the GOB timetable**).

## MCE Final Workshop and CEOs Meeting

12. Focus of this TA was to prioritize sections of the road network for climate resilience investments based on the flood susceptibility and socio-economic criticality. While the flood susceptibility assessment was based on expert knowledge, the socio-economic criticality was determined through a participatory and transparent process including a large number of stakeholders including the public and private sector, NGOs, academia, the civil society etc. The MCE Final Workshop took place on June 21<sup>st</sup> (see Annex 3 for event Agenda), at the San Ignacio Resort and provided an overview of the applied methodology, process, results, discuss lessons learnt and gathered data/information. Over 20 people from a number of government institutions, Private Sector and NGOs participated in the event, the attendance list is presented in Annex 4.

13. The World Bank Team formally handed over all data/information in a physical Hard Drive to Ms. Kimberley Westby (deputizing for CEO Hyde). Additionally, a Practitioners Guide reporting the MCE process and the specific results achieved in Belize will be shared with the GOB in July 2016. The aim for such manual is to both record the process and results so future improvements can be proposed as well as other sectors benefit from the experience developed for the transport sector. Complementarily, the WB Team aims at disseminating the Belizean case with other countries in the Caribbean Region as well as with other partners.

14. While the June 21<sup>st</sup> event brings to the end the MCE process, as reported in the previous session, the TAM Technical Assistance will aim at providing specific and in-depth support to the MOW so key advances can be achieved in light of CRIP as well as the notably importance of the transport sector for the Belizean economy and communities. Further to the event, a CEO Meeting was held in Belmopan so the WB could inform line ministries CEOs on the availability of data collated throughout the MCE process, findings from the Technical Assistance and need for all Ministries to develop ownership in order to ensure MCE's legacy is not lost. A lively discussion between the WB Team and members of the CEO Caucus took place and it was agreed that GIS data and lessons learned from the MCE process are of great value for informed decision-making (see Annex 5).

15. Finally on June 23<sup>rd</sup>, an in-depth technical working session was organized at MOW to explain data gathering process and possible future use of collected and collated data that included road network, public buildings, baseline data as well as natural hazard data. The session was attended by 16 participants from different Line Ministries (see Annex 6) and 7 hard drives containing data and reports were handed over to the participants. Another 11 hard drives were given to Dr. Wendel Parham (CRIP Project Coordinator) to be distributed to other line ministries that can benefit from the data as well as 1 to representatives from the European Union based in Belmopan.

## CRIP Supervision

16. The WB and SIF Teams met in the afternoon of June 22<sup>nd</sup> to discuss CRIP's implementation and the current Action Plan. The following list briefly presents the activities discussed and agreements reached. The updated Action Plan according to the discussions held is presented in Annex 6:

- **Feasibility Study:** activity delayed. Evaluation Report expected to be submitted to the WB by July 13<sup>th</sup>. Firms agreed to extend the proposals to meet the delayed evaluation process, financial analysis and contract negotiation. Contract signature expected to take place late October 2016;
- **ESIA RFP:** WB Team committed to provide a feedback by the end of the week of June 27;
- **MOW Testing Laboratory:** Technical Specifications and a One-pager Rationale to be submitted to the Bank on the week of June 27;
- **NSDI TA Activity:** a discussion on interim results from the consultancy was held in light of the upcoming contract due date. Given the high likelihood of the need to extend the contract for the third time, the WB Team has requested that proper justification from both GOB and the consultant is documented. In this context, the TTL highlighted his concerns with the practical results from the consultancy given the historical difficulties to move the NSDI initiative in the country. Hence, it was suggested to have a comprehensive discussion among the Project Coordinator, MNRI and the consultant hired to readjust (if necessary) the development strategy so the GOB can best benefit from the TA as well as ensure an effective use of resources; and
- **Land Use:** EOI advertised with due date in July 7<sup>th</sup>. RFP expected to be sent along with the short list report.

17. It was informed that the PSC requested from the PMU an Implementation Plan, which will guide the review of the Procurement Plan. It is expected that both documents will be submitted to the Bank by late July for appropriate review and clearances.

## BMDP Supervision

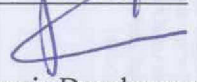
18. The SIF provided to the Bank an updated table with information on ongoing civil works under Municipal Development Project (please refer to Annex 8). It was agreed to have an audio early July to further discuss the civil works.

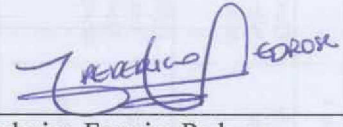
## Conclusions


18. The mission expresses its overall satisfaction with the GOB and its staff for participation in the TAM scoping mission in the week of June 6 as well as in the follow up activities in the week of June 20 according to the agreed Mission Announcement Letters.

19. Taking advantage of meetings at the Belize Social Investment Fund (BSIF), the WB Team has met with the MDP project coordinator and his team in order to be updated on the current status of the civil works undergoing (see Annex 8). Initial discussions for the MDP's supervision mission planned for August 8 were also conducted and the teams will be following up on the course of next month to agree on the agenda.

20. The mission expressed its concern at the less than satisfactory performance of CRIP given the delays experienced and non-compliance of the agreed Action Plan from February's mission. The TTL highlighted that an Implementation Status Report due in September 2016 when a thoughtful review of the project will be, once more, conducted. Therefore, it is paramount for the PMU to ensure a speedy development of ongoing activities (in particular, the Feasibility Study and ESIA) to put the Project onto a more sustainable trajectory.

  
Yvonne Hyde  
CEO  
Ministry of Economic Development  
and Petroleum

  
Frederico Ferreira Pedrosa  
Task Team Leader (CRIP)  
World Bank

  
Diana Rubiano Vargas  
Task Team Leader (MDP)  
World Bank

## Annex 1: TAM Matrix of Activities

### Asset Management Summary of Current State and Steps Forward

This table summarizes the initial brainstorming session between the World Bank and the MOW on Asset Management. This is the result of interactive dialogue identifying current practice and improvement opportunities in Asset Management.

	What Are We Doing Now	What Can We Do Within 1 Year	Key Steps	Responsibility	Beyond That Vision
Data Collection and Governance	Manual forms completed with District and MIS Unit in partnership. Forms are manually input into database by MIS Unit.	Empower Districts to do more data collection (Resource and Training Limitations)	- Conduct training of Data Collection Process (Why, How, tools, process, etc...) - CITO to provide options - ArcGIS Training - Identify village streets and incorporate into maps	MoWTN - System Administrator (Mr. Garson Remmarace)	Data management integrated into the field activities at the District Level. Trained and competent people at managing data in the field district offices and HQ. Sustainable Process for continuous update of inventory. Do we add Municipal Streets? Better identify high risk asset. (i.e. undersized culverts)
Road Network and Asset Inventory	Includes Highways Only (Primary, Secondary, and Feeder). Pavement Markings and Guardrails, Manual Collection stored on Microsoft Access Database, Query Database	Migrate from linear data to spatial data to update Inventory using Geospatial Data to improve accuracy. Clearly define village streets to include in the overall maps.		MoWTN - System Administrator (Mr. Garson Remmarace)	
Pavement and Other Asset Condition Survey	Visual Assessment Yearly (manually site visits district level) Once identified, further testing occurs on a specific basis. (i.e. Deflection and IRI)	Inexpensive tools and equipment (i.e. bump integrator IRI). Road Condition Survey update done using standard form on mobile device while performing maintenance tasks. (Smart Phones, IRI)	- Investigate condition assessment measurement tools and equipment, i.e. IRI app, bump integrator, speed gauge, etc... - Purchase of mobile devices - Develop a pilot process (create condition assessment form, database platform, purchase mobile devices)	MoWTN - Executive Engineer (Mr. Irving Thimbriel) MoWTN - System Administrator (Mr. Garson Remmarace)	Train Districts to utilize technology at District Level Regularize the code for Pavement Condition Assessment (British Standard moving to AASHTO and ASTM codes and standards). Look at Design Load standards (Revisiting Standards due to Overloading to harmonize with other Central American countries, study to provide recommendations and to advise on control mechanisms such as weigh stations)
Traffic and Axle Load Measurement	Adhoc basis.	More frequent monitoring using Traffic Sensors, Axle Loading Measurement (At least once a year, ideally twice a year)	- Develop a plan to measure Axle loading (i.e. Purchase Portable Weight Bridges?) - Develop a Deployment Plan of traffic sensors (i.e. Determine locations of each, frequency of data collection, possible purchase of additional sensors)	MoWTN - Executive Engineer (Mr. Irving Thimbriel)	Follow-up on ICM report (CDB) to recommend strategy and policy and system.
Institutional Aspects					
Design including Safety	Have an operations manual that covers the basics of maintenance	Dynamic Analysis	- Investigate use of Dynamic Analysis Software in Design Process	MoWTN - Executive Engineer	Moving toward a National Standard (i.e. increase to 9.2 tons to align with country

Roles Field to HQ	Maintain consistency with resources, District Level Maintenance Engineers and Crews. Once work program is approved at HQ, the work activities are supervised by Zones	Equipment and Staff Challenges. (Resignation and Retirement)	- Develop a Equipment Availability Optimization plan	(Mr. Irving Thimbriel)	neighbors). Training on Design Software available.
Funding Procedures	After Annual Program, a monthly program is submitted and approved by the MOF. Funds are provided as available on a monthly.	Administratively changing timing of distribution of funding to more effectively use maintenance money (i.e. time of year, dry season) Funds classified as capital can be re-classified as re-current.	- Develop recommendations for changes in the budgeting processes for discussion with MoF - Breakdown by geographic area of maintenance costs with monthly cash flow projections - Meet with MoF to discuss possible administrative/budget changes	MoWTN - Chief Engineer (Mr. Lennox Bradley) and Equipment Manager (Mr. Smith)	Succession Personnel Planning. Systematic Replacement of Equipment Plan
Risk Assessment	Case by Case Basis, based on previous experience. Lack of Hydrological Data.	Climate Change risk training, flood mitigation. Hydrological Data Collection Plan (Met Office).	- Coordinate Training Availability with WB - Develop Hydrological Data Needs for Works - Meet with Met Office to discuss Hydro Data Needs	MoWTN - Chief Engineer (Mr. Lennox Bradley) and WB MoWTN - Executive Engineer (Mr. Irving Thimbriel)	Road Maintenance Fund. Road User Fees.
Project Prioritization and Optimization - What if Scenarios		InterMinistry Data Sharing Plan (Format line ministry needs the data in NSDI)	- Follow-up with NSDI steering and technical committees	MoWTN - Chief Engineer (Mr. Lennox Bradley)	Practical/Sustainable Waterway Maintenance Plan (Maintenance Fund)
Training including South-South Exchange		Asset Management Experience Exchange of Information with Neighboring Country	- WB to follow-up with what other countries are doing and interest - Works to investigate if interested in other countries' practices	MoWTN - Chief Engineer (Mr. Lennox Bradley) MoWTN - System Administrator (Mr. Garson Remmarace) WB	Economic and Scientific criteria (Data Driven). Appraisal criteria. Shared responsibilities with other Ministries (i.e. capital projects MED at National Level)
Valuation of Infrastructure		Economic Value of Infrastructure, Opportunity Costs		MoWTN, MoF, MED	

## **Annex 2: TAM Work Plan**

### **To be further elaborated.**

*18 month program timeline through end of 2017*

#### Actions to be completed in CY 2016 (partial, initial list)

**(By end July) ....**

Identify and collect key source documents

Develop process map for current arrangements

Make any additional comments and suggestions on current MOW procedures

**(By end August)**

Complete table with proposed year 1 activities fully defined

Develop cost estimates and source of funding for all activities

Develop metrics for MOW in the current fiscal year

Prepare process map for revised arrangements

**(By end September)**

Prepare 2017/2018 budget submission ....

... discuss with MOF funding envelope and conditions for next FY ..

... separate identification of maintenance budget needs by zone

Initiate various year one activities by now

Initiate monthly monitoring of achievement of objectives/metrics by now

#### Actions carrying over in CY2017

Continue monthly monitoring of achievement of objectives/metrics

**(By end February)**

Finalization of 2017/2018 budget

Study of road maintenance financing received and reviewed

**(By end April)**

Identification of parameters for TAM system

Define data requirements and key model characteristics

Determine institutional and financing requirements (capital and recurrent) for TAM

**(By end June)**

Decision on future road management and financing system

Review medium term objectives and timeframe for TAM

**(By end September)**

Prepare 2018/2019 budget with full integration of TAM



### Annex 3: Agenda of the MCE closing event

<i>Time</i>	<i>Activity</i>	<i>Presenter/Facilitator</i>
9:00 - 9:30	Welcome Prayer Opening remarks	<ul style="list-style-type: none"> <li>• Mr. Wendel Parham, CRIP Project Coordinator, SIF</li> <li>• Ms. Yvonne Hyde, CEO, MED</li> <li>• Mr. Frederico Pedroso, Task Team Leader, World Bank (WB)</li> </ul>
9:30 - 10:30	<b>Presentation:</b> Transport infrastructure prioritization methodology and application in Belize	<ul style="list-style-type: none"> <li>• Ms. Melanie Kappes, Disaster Risk Assessment Specialist, WB</li> </ul>
10:30 - 11:00	<b>Coffee Break</b>	
11:00 - 11:30	<b>Presentation:</b> Results of the prioritization process and use for investment decision-making	<ul style="list-style-type: none"> <li>• Mr. Marion Cayetano, Data Strategy Specialist, WB</li> </ul>
11:30-12:30	<b>Work session:</b> Discussion on the methodology & process, identification of potential further uses and identification lessons learnt	<ul style="list-style-type: none"> <li>• Mr. Marion Cayetano and Ms. Melanie Kappes, WB</li> </ul>
12:30 - 13:30	<b>Lunch Break</b>	
13:30 - 14:00	<b>Presentation:</b> Spatial data collated and created to support the prioritization process	<ul style="list-style-type: none"> <li>• Mr. Jan Meerman, Data Visualization Specialist, WB</li> </ul>
14:00 - 14:30	<b>Presentation:</b> Geospatial data management for resilient transport infrastructure	<ul style="list-style-type: none"> <li>• Mr. Bishwa Pandey, Sr. Data Management Specialist, WB</li> </ul>
14:30 - 14:45	<b>Coffee Break</b>	
14:45 - 15:45	<b>Work session:</b> Geospatial data for informed decision-making - next steps	<ul style="list-style-type: none"> <li>• Mr. Bishwa Pandey, Sr. Data Management Specialist, WB</li> </ul>
15:45 - 16:00	<b>Closing</b>	<ul style="list-style-type: none"> <li>• Mr. Frederico Pedroso, Task Team Leader, World Bank, WB</li> </ul>

Annex 4: MCE Final Workshop Attendance List

No	First name	Surname	Affiliation	Position	Email/phone
21	Kim	Aikman	BCCI	CEO	ceo@bcci.org
22	Wilfredo	Zetina	SISE Town Council	Traffic Manager	trffic@sise.gov.bz
23	WENDEL	PARHAM	CAIP	PROJECT COORDINATOR	wendel.parham@caip.gov.bz william.lamb@.org
24	WILLIAM	ZAMB	BSIF	EXECUTIVE DIRECTOR	sifbelize.org
25	JORGE	ESPEJO	CRIP	PROJECT ENGINEER	JORGE.ESPEJO@sifbelize.org
26	ERNEST	RAYMOND	BMPD/SIF	Project Coord	erest.raymond@sifbelize.org
27	Lizett Bell	Bell	Ministry of Health	Director Policy Planning, Project Management	lbell@health.gov.bz
28	CEPOLO	PERRON	SIB	DIRECTOR GENERAL	cperron@man.sib.org.bz
29	Ron	Vasquez	DOE	Environment	ron.vasquez@doe.gov.bz
30	Kevin	BERNARD	OWTC	MAYOR	mayor@owtc.gov.bz
31	Harold	DEY	OWMTA	Supervisor	harolddey54@gmail.com
32	LINCOLN	BLAKE	MITC	DIRECTOR INFORMATION	director.investment@itc.gov.bz
33	Francis	KRUZ	MNR I	Principal Land Planning	frank.kruz@naturalresources.gov.bz
34	Kimberley	Westley	MED	Economist	kimberley.westley@med.gov.bz
35	Rina	SCOTT	MHUD	Administrative Officer	administrative.officer@housing.gov.bz
36	CLIFFORD	KING	MLG	LGO	clifford.king@labour.gov.bz
37	JAN	MEERMAN	W.B.	Consultant	meerman@btp.net
38	EDMUND	BERRY	MOWT	SURVEYOR	edmundberry@gmail.com



Closing Event

**Multi-Criteria Evaluation of Belize's Road Network**

San Ignacio Resort Hotel, San Ignacio, Belize

June 21<sup>st</sup> 2015

**Participant's List**

No	First name	Surname	Affiliation	Position	Email/phone
1	Sonia	López López	European Union	Project Manager	sonia-lopez-lopez@ec.europa.eu
2	FRANCIS	Humphreys	Dep. Town Council	Mayor	francis.humphreys@bhamph.com 621-0068
3	FREDERIKO	Pedroso	WB	TTL/DRM Spec	fpedroso@worldbank.org 522-0627
4	BISHWA	PANDEY	WB	Data Spec	BISHWA.PANDEY@gmail.com
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## Annex 5: MCE Final Workshop Notes

### Summary:

#### Identified strengths of the process and the methodology

- technically sound and allowing to maximize resources
- Relatively diligent and including a monitoring and evaluation component
- Useful, systematic and iterative methodology
- reliable and broad process
- Consultation with stakeholders throughout the process. Technical people and CEOs contributed, partners were consulted
- Very useful information
- Variables under consideration, e.g. the flood susceptibility

#### Identified weaknesses of the process and the methodology

- Policy influence in the process which led to a stronger focus on economic benefits while less social issues/ rural issues were considered.
- Tertiary roads not included in the analysis
- Limited baseline data/information available for the process; therefore only flooding and no other climate-related hazards were considered
- More community involvement through consultation would have been good
- Length of the project, from 2013 to 2016

#### The following questions were raised:

- Was there awareness of existing services and investments? E.g. the IDB activity on the George Price Highway or the National Transport Masterplan
- Only the MCE was used – could another model be run and the results be compared?

It was raised that more capacity building would be needed, e.g. to replicate such a process

#### Lessons learnt:

- Need to have the same representatives throughout the process for continuity was raised
- Importance of frequent updates of data
- Need for more data

The participants saw the methodology as clearly transferable to other processes (especially as it relates to resource allocation), e.g. for the health and education sectors, disaster preparedness, utility services and resource allocation for social infrastructure.

Annex 6: Data User Session Attendance List



Multi-Criteria Evaluation of Belize's Road Network

Working Session – Ministry of Works Transport and NEMO

June 23<sup>rd</sup> 2016

Participant's List

No	First name	Surname	Affiliation	Position	Email/phone
1	Kimberley	Westby	Ministry of Economic Dev.	Economist	828 4158
2	ERWIN	JULIEN	Department of Environment	Data manager	828 4861
3	Christian	WINDSOR	Department of the Environment	Environmental Officer	828-5158
4	Araceli Luna	Luna	Ministry of Agriculture	Statistical officer	828-5098
5	ANDREW	HARRISON	Min. of Agric	Agric Officer	828-5095 andrew.harrison@agricult.gov.bz
6	ERNESTO	THIMBREL	DEPT OF YOUTH SERVICES	PSC COORDINATOR	621-8101/809-2619 ext. 62 ernestothimbrel@gmail.com
7	WENDEL	PARHAM	CRIP	PROJECT COORDINATOR	wendel.parham@stb.gov.bz 605 2979
8	GARSON	RANWARACE	MIN/WORKS	SYS. ADMIN II	sys.admin@now.gov.bz 634-1465
9	JORGE	ESPATO	CRIP	PROJECT ENGINEER	jorge.estepe@stb.gov.bz 610-0625
10	BISHWA	PANDEY	WB	Sr. Data specialist	BISHWA.PANDEY@gmail.com
11	Melanie	Kappes	WJ	DRM Specialist	mlkappes@worldbank.org
12	FREDERICO	PEDROSO	WB	DRM Specialist	fpedroso@worldbank.org
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14	Eddie'	Herrera	Ministry of Tourism and Civil Aviation	Tourism officer	eddie.herrera@tourism.gov.bz 6345187
15	Francis	ARZU	Ministry of Infrastructure	PLIO	Francis.arzu@now.gov.bz 615 4512
16	Michelin	GILROY	Ministry of Works	Civil Engineer	michelin.gilroy@now.gov.bz
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**Annex 7: CRIP Action Plan**

**UPDATE ON CRIP ACTION PLAN FROM FEBRUARY 2016 WB MISSION**

**(AS AT 23 JUNE 2016)**

<b>Action (s)</b>	<b>Due date</b>	<b>Revised Dates</b>
Complete evaluation (technical and financial) and prepare recommendation of award for the Feasibility Study. Initiate negotiations and draft contact.	Was due end of March for technical Evaluation	Evaluation of the Technical Reports is to be completed by July 7 <sup>th</sup> , sent to the WB by July 13 <sup>th</sup> , responded to by WB by July 27 <sup>th</sup> ; Financial Proposals to be opened by August 10 <sup>th</sup> , Evaluation Report to be sent to the WB on August 19 <sup>th</sup> , WB to respond by September 2 <sup>nd</sup> ; Negotiations to be completed by September 16 <sup>th</sup> and report sent to WB, WB to respond by September 30 <sup>th</sup> ; Contract to be signed by October 21 <sup>st</sup> 2016.
Complete and issue ESIA RFP, evaluation and recommend contract award	Was agreed for March 4, 2016	The completed RFP for the ESIA was sent to the WB on June 16 <sup>th</sup> , WB to respond by week of June 27 <sup>th</sup> , to be issued by June 29 <sup>th</sup> , and Proposals to be returned by July 27 <sup>th</sup> ; Evaluation of Proposal to start on July 29 <sup>th</sup> and report is due by September 9 <sup>th</sup> ; Financial Proposal to be opened by September 23 <sup>rd</sup> ; Negotiation to take place and contract to be signed by October 14 <sup>th</sup> 2016.
Draft equipment specification and TOR for installation and training plan for MOW Testing Laboratory	Was due March 11, 2016 (equipment specification) and March 31 (training)	Equipment specification and TOR for installation and training plan is due by week of June 27 <sup>th</sup> , 2016.

Develop proposed support to asset management, data collection and analysis	Was due end of March, 2016	Being done through the Transport Asset Management (TAM) TA which was initiated on June 6th
Complete NSDI Interim Report and develop work plan for completion of consultancy	Was due end of April 2016	Planned for mid-August 2016
Review the TORs for System Administration and data administration	Was due March 2, 2016	Was done by the WB and now with the MNRI to consider WB comments. To be revised by MNRI by June 30 <sup>th</sup> , 2016
Carry out recruitment of 2 specialists based on TORs agreed with the Bank	Was due for end of April, 2016	Planned to advertize in July with expectation to sign contracts by October, 2016
Initiate procurement of consultancy services for land Use TA, Issue RFP and short list	Was due for end of June 2016	The REOI was published in the week of May 30 <sup>th</sup> , 2016 with due date for submission of July 7 <sup>th</sup> ; the RFP is to be published in July; Proposals to be evaluated in Sept/October; Contract signature by December 2016

**Annex 8: MDP Civil Works Update**

**Municipal Development Project**

As of May 31st 2016

Contract #	Name	Sub-project	Progress							Challenges and Solutions during Construction			
			Physical (%)	Lined drains (M)	Unlined drains (M <sup>2</sup> )	Distance/length (M) (M <sup>2</sup> )	Financial (%)	Original & Revised Contract Sum BZD	Funds disbursed (BZ \$)	Technical Issues	Solutions	Safeguards Issues	Solutions
1	Street Rehabilitation Project	Rehabilitation of 1st Street South & 6th Avenue in Corozal Town and Rehabilitation of North Park & South Park Streets and Lovers Lane in Orange Walk Town (7958 -BZ/20)	100	256		490	95%	639,788.50	607,799.08	Scope of works completed and Practical Completion was achieved on March 30th, 2016. The project is now in Defects Liability Period and will complete April 1st, 2016.	No issues	No issues	No issues
2	Street Rehabilitation Project	San Ignacio - Rehabilitation of Cahal Pech, Martin Galvez, Bishop Desmond and Carmelita Streets. Santa Elena - Rehabilitation of Salazar Street. (7958-BZ/W22)	75	2193	260	1457	43%	1,660,926.75	720,988.12	1) BWS water main affected design of Cahal Pech Street. 2) Open earthen drain inadequate on the LHS of Martin Galvez St. 3) Location of pedestrian crossings to be relocated by Town Council	1) Road camber and drain section modified in some sections. 2) Lined U-drain constructed to manage flow of storm waters.	Environmental - Presently contractor have been working closely with Town council regarding traffic management and public awareness of the project.	Residents who desire a wider vehicular crossing are to negotiate the cost difference with the contractor to have the same constructed as desired
3	Street Rehabilitation Project	Benque Viejo - Rehabilitation of Independence and Juanito Gongora Streets	90	835		1109	53%	991,695.00	526,042.03	1) Existing drain walls damaged during construction of Independence and Juanito Gongora Streets 2) Corroded existing metal culvert on Juanito	1) Place braces to support drain wall, demolish and replace sections found inadequate. 2) Excavate corroded	Environmental - Presently contractor have been working closely with Town council regarding traffic management and public awareness of the project.	Areas where existing drains are damaged and blocked, are recommended for



4	Street Rehabilitation Project	Belmopan - Rehabilitation of Roaring Creek, Mussel Creek, Haulover Creek, Garbutt Creek and Portion of Barton Creek Street (7958-BZ/W24)	85	2925		1786	54%	2,778,274.80	1,492,700.42	1) Drain invert for Garbutt Creek St at intersection with Mountain View Blvd. is 200mm higher than culvert invert which cross MVB. 2) Drains on Constitution Drive are not adequate to receive the volume of storm water to be deposited from Wauhl and Barton Creek Streets	1) Demolish section of drain which is higher than the culvert invert to ensure flow of storm water from MVB culvert into the LHS Garbutt Creek Drain 2) Replace inadequate culvert diameters at property crossings on Constitution Drive between Wauhl and Barton Creek Streets. Also required is a culvert to cross Constitution Drive at the intersection with Barton Creek Street to deposit storm waters into the West Constitution Drive drain	1) Drains at 90 degree turns on Roaring Creek St. is a driving obstacle for some drivers. 2) Deep drains on curves of Garbutt Creek and Haulover Creek Streets are driving obstacles for some drivers and may at times affect pedestrians as well	1) Place approved metal barriers at affected sections. 2) Place metal grills over drains in affected sections
5	Street Rehabilitation Project	Rehabilitation of Gadsby Ramos Street and a section of Trucking Boulevard in Dangriga Town (7958-BZ/W25)	65	2280		1165	43%	1,754,139.50	754,516.19	No issues experienced so far, Contractor adhering to contractual design.	N/A	Environmental - Presently contractor have been working closely with Town council regarding traffic management and public awareness of the project. Social - The construction of a bypass to facilitate accessibility of high school students to and from their school.	A temporary access was constructed to facilitate proper movement by pedestrians and vehicles in the vicinity of the High School in this location.
6	Street Rehabilitation Project	Rehabilitation of Robert K. Pennell & Lucille Melendrez Streets and Hopeville Loop in Punta Gorda Town (7958-BZ/W26)	75	1044	1100	1197	44%	1,702,214.33	744,353.33	Works proceeding according to approved work programme	No issues	Environmental - Presently contractor have been working closely with Town council regarding traffic management and public awareness of the project.	No issues

8	Construction of Sidewalks	Construction of sidewalks in downtown area to Churchill Street and Rehabilitation of Sidewalks around Centennial Park (7958-BZ/W17)	100			950.81	100%	432,853.50	432,853.50				
9	Rehabilitation of Existing Structures	Rehabilitation of the Existing Market & Sports Complex in Corozal Town (7958-BZ/W15)	100			1516.25*	95%	701,421.64	666,350.55				