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Report No: PAD1731

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 71.3 MILLION

(US$100 MILLION EQUIVALENT)

AND A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 71.3 MILLION

(US$100 MILLION EQUIVALENT)

IN IDA CRISIS RESPONSE WINDOW RESOURCES

TO THE

REPUBLIC OF THE UNION OF MYANMAR

FOR A

FLOOD AND LANDSLIDE EMERGENCY RECOVERY PROJECT

June 30, 2016

Social, Urban, Rural and Resilience Global Practice
East Asia and Pacific Region

CURRENCY EQUIVALENTS
Exchange Rate Effective (May 31, 2016)

Currency Unit	=	Myanmar Kyat (MMK)
MMK 1,186	=	US$1.00
US$1.40288	=	SDR 1.00

FISCAL YEAR
April 1 – March 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
CBDRM	Community-based Disaster Risk Management
CERIP	Contingent Emergency Response Implementation Plan
CIU	Component Implementation Unit
DA	Designated Account
DOH	Department of Highways
DRD	Department of Rural Development
DRM	Disaster Risk Management
ECOP	Environmental Codes of Practice
EIRR	Economic Internal Rate of Return
EMPF	Ethnic Minority Planning Framework
ESMF	Environmental and Social Management Framework
FM	Financial Management
GDP	Gross Domestic Product
GIS	Geographic Information System
GoM	Government of Myanmar
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
ICT	Information and Communication Technology
IFR	Interim Financial Report
IRM	Immediate Response Mechanism
IST	Implementation Support Team
JICA	Japan International Cooperation Agency
M&E	Monitoring and Evaluation
MOALI	Ministry of Agriculture, Livestock, and Irrigation
MOC	Ministry of Construction
MOPAF	Ministry of Planning and Finance
NPV	Net Present Value
PDNA	Post-Disaster Needs Assessment
PDO	Project Development Objective
POM	Project Operational Manual
RAP	Resettlement Action Plan
RCC	Recovery Coordination Committee
RPF	Resettlement Policy Framework
SCF	Standard Conversion Factor

SO	State Office
SORT	Systematic Operational Risk-Rating Tool
ToR	Terms of Reference

Regional Vice President:	Victoria Kwakwa
Country Director:	Ulrich Zachau
Senior Global Practice Director:	Ede Jorge Ijjasz-Vasquez
Practice Manager:	Abhas K. Jha
Task Team Leader:	Henrike Brecht, Michael Bonte-Grapentin, Zuzana Stanton-Geddes

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Myanmar Flood and Landslide Emergency Recovery Project (P158194)

PROJECT APPRAISAL DOCUMENT

EAST ASIA AND PACIFIC

Social, Urban, Rural and Resilience Global Practice

Report No.: PAD1731

Basic Information			
Project ID P158194	EA Category B - Partial Assessment	Team Leader(s) Henrike Brecht, Michael Bonte-Grapentin, Zuzana Stanton-Geddes	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [X] - Natural or man-made disaster		
	Financial Intermediaries [ ]		
	Series of Projects [ ]		
Project Implementation Start Date 14-Jul-2016	Project Implementation End Date 30-Jun- 2021		
Expected Effectiveness Date 14-Oct-2016	Expected Closing Date 31-Dec-2021		
Joint IFC No			
Practice Manager/Manager Abhas Kumar Jha	Senior Global Practice Director Ede Jorge Ijjasz-Vasquez	Country Director Ulrich Zachau	Regional Vice President Victoria Kwakwa
Borrower: Republic of the Union of Myanmar			
Responsible Agency: Ministry of Agriculture, Livestock and Irrigation			
Contact: U Khant Zaw		Title:	Director General
Telephone No.: 95-67-401109		Email:	kzaw.dda@gmail.com
Responsible Agency: Ministry of Construction			
Contact: U Kyaw Linn		Title:	Permanent Secretary
Telephone No.: 95-67-407073		Email:	eekyawlinn@gmail.com
Project Financing Data(in USD Million)			

[ ]	Loan	[ ]	IDA Grant	[ ]	Guarantee
[X]	Credit	[ ]	Grant	[ ]	Other

Total Project Cost:	200.00	Total Bank Financing:	200.00
Financing Gap:	0.00		

Financing Source	**Amount**
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	200.00
Total	200.00

Expected Disbursements (in USD Million)

Fiscal Year	2017	2018	2019	2020	2021	2022	0000	0000	0000	0000
Annual	10.00	15.00	50.00	70.00	45.00	10.00	0.00	0.00	0.00	0.00
Cumulative	10.00	25.00	75.00	145.00	190.00	200.00	0.00	0.00	0.00	0.00

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Institutional Data

Practice Area (Lead)

Social, Urban, Rural and Resilience Global Practice

Contributing Practice Areas

Agriculture, Transport & ICT

Cross Cutting Topics

[X] Climate Change
[X] Fragile, Conflict & Violence
[X] Gender
[X] Jobs
[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Health and other social services	Other social services	20		
Transportation	Rural and Inter-Urban Roads and Highways	45	80	
Water, sanitation and flood protection	General water, sanitation and flood protection sector	35	80	
Total				100

☐ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Social protection and risk management	Natural disaster management	40
Rural development	Rural non-farm income generation	20
Rural development	Rural services and infrastructure	40
Total		100

Proposed Development Objective(s)

The project development objective is to support the recovery in priority areas affected by the 2015 floods and landslides in Myanmar and, in the event of another Eligible Crisis or Emergency, to provide immediate and effective response to said Eligible Crisis or Emergency.

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Components

Component Name	**Cost (USD Millions)**
Component 1: Resilient Rehabilitation of National Roads	105.00
Component 2: Resilient Rehabilitation of Rural Roads and Livelihoods Support	70.00
Component 3: Provision of Eligible Goods	15.00
Component 4: Project Management and Knowledge Support	10.00
Component 5: Contingent Emergency Response	0.00

Systematic Operations Risk-Rating Tool (SORT)

Risk Category	**Rating**
1. Political and Governance	High
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	High
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Disaster and Climate	Substantial
OVERALL	Substantial

Compliance		
Policy		
Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any waivers of Bank policies?	Yes [ ]	No [X]
Have these been approved by Bank management?	Yes [ ]	No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04	**X**	
Forests OP/BP 4.36	**X**	
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10	**X**	
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Institutional Arrangements (Section I.A, Schedule 2 of Financing Agreement)	X		CONTINUOUS

Description of Covenant

Obligation of the Recipient to maintain, throughout the Project implementation period, the Project implementation support team and the component implementation teams in the MOC and MOALI, all with mandates, composition, staffing, and resources satisfactory to the Association.

Name	**Recurrent**	**Due Date**	**Frequency**
Project Operational Manual (Section I.B, Schedule 2 of Financing Agreement)	X		CONTINUOUS

Obligation of the Recipient to carry out the Project (other than Component 3 and Component 5) in accordance with the Project Operational Manual, and not amend, waive, or abrogate any provisions of the manual unless the Association agrees otherwise in writing.

Name	**Recurrent**	**Due Date**	**Frequency**
Annual Work Plans and Budgets (Section I.C,	X		YEARLY

Schedule 2 of Financing Agreement)			

Description of Covenant

Obligation of the Recipient to furnish to the Association an annual work plan and budget for the Project, in form and substance satisfactory to the Association, covering the activities and expenditures proposed for each Government fiscal year, and implement the activities under the Project in accordance with such plan and budget.

Name	Recurrent	Due Date	Frequency
Environmental and Social Safeguards (Section I.E, Schedule 2 of Financing Agreement)	X		CONTINUOUS

Description of Covenant

Obligation of the Recipient to ensure that the Project is carried out in accordance with the provisions of the ESMF and the safeguard provisions of the Financing Agreement, not amend, abrogate, or waive any of the safeguard instruments unless the Association agrees otherwise, and report on their status of implementation as part of the semiannual progress reports.

Name	Recurrent	Due Date	Frequency
Emergency Response (Section I.F, Schedule 2 of Financing Agreement)	X		CONTINUOUS

Description of Covenant

Obligation of the Recipient to ensure that the activities under Components 3 and 5 are carried out in accordance with the IRM Operations Manual and all relevant emergency response implementation plan(s) and safeguard requirements.

Conditions

Source Of Fund	Name	Type
IDA	Withdrawal Conditions	Disbursement

Description of Condition

The Recipient may not withdraw the proceeds of the Financing as may be allocated to Component 5 unless an Eligible Crisis or Emergency occurred, related safeguards instruments and requirements were completed, emergency response implementing entities have adequate staff and resources, and provisions of the IRM OM remain -or were updated to be- appropriate for emergency activities' implementation.

Source Of Fund	Name	Type
IDA	Withdrawal Conditions	Disbursement

Description of Condition

The Recipient may not withdraw the proceeds of the Financing allocated to Components 1, 2 and 4 unless and until it has adopted the Project Operational Manual, in form and substance satisfactory to the Association.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Henrike Brecht	Team Leader (ADM	Senior		GSU08

	Responsible)	Infrastructure Specialist		
Michael Bonte-Grapentin	Team Leader	Senior Disaster Risk Management Specialist		GSU08
Zuzana Stanton-Geddes	Team Leader	Operations Analyst		GSU08
Sirirat Sirijaratwong	Procurement Specialist (ADM Responsible)	Procurement Specialist		GGO08
Simon B. Chenjerani Chirwa	Procurement Specialist	Senior Procurement Specialist		GGO08
Siriphone Vanitsaveth	Financial Management Specialist	Sr Financial Management Specialist		GGO20
Ana Nunez Sanchez	Safeguards Specialist	Consultant		GWA02
Carmenchu D. Austriaco	Team Member	Finance Officer		WFALN
Chanin Manopiniwes	Team Member	Infrastructure Economist		GTI02
Demilour Reyes Ignacio	Team Member	Program Assistant		GWA02
Doekle Geert Wielinga	Team Member	Senior Disaster Risk Management Specialist		GSU13
Dung Anh Hoang	Team Member	Sr Transport. Spec.		GTI02
Frederick Yankey	Team Member	Sr Financial Management Specialist		GGO20
Khin Aye Yee	Team Member	Consultant		EACMM
Kyemon Soe	Team Member	Financial Management Analyst		GGO20
Louise F. Scura	Team Member	Program Leader		EACTF
Manush Hristov	Counsel	Senior Counsel		LEGES
Satoshi Ishihara	Safeguards Specialist	Senior Social Development Specialist		GSU02
Thida Aung	Team Member	Program Assistant		EACMM
Thiha Tun	Team Member			EACMM
Wolfhart Pohl	Safeguards Specialist	Lead Environmental Specialist		GEN2A

Extended Team			
Name	**Title**	**Office Phone**	**Location**
Chi Kien Nguyen	Transport Specialist		Vietnam
Mustafa Azam	Civil Engineer		Maldives
Philippe Jacobe de Naurois	Consultant, Implementation arrangements		Bangkok

Locations					
Country	**First Administrative Division**	**Location**	**Planned**	**Actual**	**Comments**
Myanmar	Sagain	Sagaing Region	**X**		
Myanmar	Yangon	Yangon Region	**X**		
Myanmar	Rakhine	Rakhine State	**X**		
Myanmar	Bago	Bago Region	**X**		
Myanmar	Magway	Magway Region	**X**		
Myanmar	Ayeyarwady	Ayeyawady Region	**X**		
Myanmar	Chin	Chin State	**X**		

I. STRATEGIC CONTEXT

A. Country Context

1. **While resource-rich, Myanmar remains one of the poorest countries in Southeast Asia.**[1] Although significant reforms have been introduced in recent years, the economy remains centered on extractive industries and agriculture.[2] With a population of 51.4 million, the country has a per capita gross domestic product (GDP) of US$1,233 (2014).[3] In 2010, the rate of poverty was estimated to be between 25.6 percent and 37.5 percent, concentrated particularly in rural and conflict-affected areas.[4] At least 70 percent of Myanmar's poor live in rural areas, and agriculture plays a critical role for both inclusive growth and poverty reduction[5], contributing close to 29 percent of output in 2015/2016. After two years of strong growth and macroeconomic stability, Myanmar faced a more difficult economic environment in 2015-2016 when economic growth eased to seven percent from 8.5 percent in the previous year. Short-term vulnerabilities increased including growing fiscal and current account deficits (5.2 and seven percent of GDP respectively), rising inflation (11.7 percent annual average), and exchange rate pressure (30 percent depreciation). From July to September 2015, the country suffered from severe floods and landslides, which are estimated to affect economic growth by 0.8 percentage points.

2. **Following the elections held in 2010, the Government launched a series of profound reforms, which resulted in a dramatic increase in political and civil liberties.** Political prisoners were freed, media controls were relaxed, and armistices with ethnic groups were sought. In the subsequent election in November 2015, the National League for Democracy, led by Daw Aung San Suu Kyi, won 79.4 percent of the contested seats. A new Parliament was seated in February 2016 and a new Cabinet was formed in March 2016. The majority of the 18 ministers, who took office in April 2016, are members of the National League for Democracy. Addressing the emergency effectively is important for the new Government to ensure support to communities affected by the disaster.

3. **From July to September 2015, Myanmar's people and its economy were severely affected by floods and landslides.** The disaster had disproportionate impacts on the population, particularly affecting those who even before the disaster were poor. Half of the most-affected 40 townships are in the two poorest states in Myanmar, Rakhine and Chin, which have poverty rates of 78 percent and 71 percent, respectively. Loss of income and livelihoods has been compounded by loss of assets and reduced access to social services.[6] It is expected that at least 9.4 million workdays will be lost, along with US$16.9 million in personal wage income, due to the disaster.[7] With regard to per capita effects, Chin State sustained the highest value of damages and losses,

[1] World Bank. 2014. *Myanmar—Ending Poverty and Boosting Shared Prosperity in a Time of Transition: A Systematic Country Diagnostic*. Washington, DC. World Bank.
[2] World Bank. 2015. *Myanmar: Empowering People for Inclusive Growth. Country Partnership Framework for the Period 2015–2017*.
[3] World Bank. 2016. *East Asia Pacific Economic Update. Growing Challenges*.
[4] Estimate depends on methodology used. See World Bank. 2014. *A Systematic Country Diagnostic*.
[5] World Bank Development Indicators 2015.
[6] World Bank. 2015. *Myanmar Economic Monitor*. October 2015.
[7] Government of Myanmar. 2015. *Post-Disaster Needs Assessment of Floods and Landslides July–September*.

followed by Rakhine State and the Ayeyarwady Region, which has the largest absolute number of poor in the country.[8]

B. Situations of Urgent Need of Assistance or Capacity Constraints

Emergency Context

4. **The floods were a rare event with the largest disaster impacts since Cyclone Nargis in 2008.** Depending on the location, the floods have an estimated return period of 20–50 years. They were accompanied by landslides, particularly in Chin State.[9] Torrential rains started on July 16, 2015, saturating the ground. On July 30, 2015, Cyclone Komen made landfall in Bangladesh, bringing strong winds and additional rains to Chin and Rakhine States and Sagaing, Magway, and Bago Regions.[10] In Chin State, the monthly rainfall of July measured at the weather station in Hakha was equal to a 1-in-1,000-year rainfall. The combination of heavy rainfall, high soil saturation, and unstable soils in hilly areas caused widespread and devastating landslides. Up to 5.2 million people were exposed to heavy floods, strong winds, and landslides in the 40 most heavily affected townships. Over 1.6 million people were temporarily displaced, 525,000 houses were affected, and 132 lives were lost. On July 31, 2015, Myanmar's president declared a state of emergency in Sagaing, Magway, Chin, and Rakhine, designating them as disaster-affected zones, in accordance with Article 11 of the Natural Disaster Management Law.

5. **A Post-Disaster Needs Assessment (PDNA) was undertaken by the Government of Myanmar (GoM) between September 24 and October 12, 2015, to assess the impact on key sectors, understand the scale of the economic impact, and support the process of recovery and reconstruction.** The PDNA estimated that the total economic value of the effects of the floods and landslides was approximately US$1.5 billion, equivalent to 3.1 percent of GDP in 2014/2015.[11] Of this, US$615.6 million was attributed to damages and US$892.9 million to losses. GDP growth could drop by 0.8 percentage points in 2015/2016 if recovery efforts are not undertaken. In addition, the current account deficit is expected to increase to above eight percent of GDP and the fiscal deficit is projected at just under five percent of GDP.[12] Landslides had a major impact on road connectivity, and the transport sector accounts for about 50 percent of the total damages in the public domain (Table 1).

6. **Myanmar's transport infrastructure was extensively damaged by the flooding and landslides.** Damages are mainly concentrated in Chin, Sagaing, and Rakhine, representing nearly 60 percent of the total damage and loss in the transport sector. Access to essential services in large towns and state capitals was cut off as a result of the flooding and landslides, with destroyed bridges blocking even the most basic mode of transport—foot traffic. Road infrastructure remains vulnerable to further damage and total failure until permanent repair works can be completed. The disaster has worsened the existing poor accessibility in rural areas and has resulted in even longer travel times for vulnerable rural populations. The lack of access

[8] World Bank. 2014. *Myanmar—Ending Poverty and Boosting Shared Prosperity in a Time of Transition*.
[9] Government of Myanmar. 2015. *PDNA*. Based on analysis conducted by Deltares. October 12, 2015.
[10] Government of Myanmar. 2015. *Situation Report 1. National Natural Disaster Management Committee*.
[11] Government of Myanmar. 2015. *PDNA*.
[12] Government of Myanmar. 2015. *PDNA*. Based on Myanmar's fiscal year 2015/2016 (April to March).

on the rural road network also restricts the delivery of emergency supplies and will continue to hamper recovery efforts for the most-affected communities.

Table 1. Estimated Disaster Effects (Damages and Losses) by Sector (in US$, millions)

Sector	Damage	Loss	Total
Agriculture, Livestock, and Fisheries	48.2	505.7	553.9
Irrigation and Flood Control	10.3	0.0	10.3
Industry and Commerce	42.9	330.5	373.4
Health	5.2	1.2	6.4
Education	37.6	1.8	39.4
Housing	394.7	26.5	421.2
Transport	59.2	6.6	65.8
Water and Sanitation	11.5	0.7	12.2
Electricity	4.9	0.5	5.4
Communications	1.0	1.0	2.0
Disaster Risk Management (DRM)	0.0	18.4	18.4
Total	**615.5**	**892.9**	**1,508.4**

Source: Based on GoM, PDNA 2015, per exchange rate US$1= MMK 1,287.4.

7. **On August 10, 2015, the Recovery Coordination Committee (RCC) was formed by the Government and tasked to manage the recovery planning and implementation.** The RCC consists of 28 members from line ministries and is chaired by the Ministry of Construction (MOC), which is also responsible for the overall coordination of the proposed project. The RCC highlighted the needs of the transport and agriculture sectors and the overall urgency to support the livelihood of affected populations. In August 2015, the vice president outlined a national recovery coordination mechanism and guiding principles for building back better. Based on the multisectoral PDNA results and recommendations, these principles have been followed by the outgoing Government, and their implementation is expected to continue under the new Government.

8. **Financial constraints and the change of Government have affected the recovery process.** As of October 6, 2015, the Government had allocated US$59.5 million from its own resources to respond to the disaster.[13] As of March 1, 2016, support from development partners totaled US$203 million.[14] For example, in Chin State, the Asian Development Bank (ADB) provides US$12 million in grants to support rural infrastructure rehabilitation and income generation. Overall, a shortfall in the assistance for floods recovery was noted. Nearly one year after the severe flooding, many poor communities in rural areas are still facing major problems, including food shortages. The change of Government had implications on the processing timelines of the reconstruction efforts, including the proposed project. The outgoing Government decided to not commit to major investments on behalf of the new Government, and the proposed

[13] Government of Myanmar/National Natural Disaster Management Committee. 2015. *Situation Report 6*. October 6, 2015. Since then, the Government has not released updates on allocations to the disaster response.
[14] Office for the Coordination of Humanitarian Affairs Financial Tracking Services and bilateral information.

project was approved by the new Parliament. The new Government is determined to address the remaining recovery needs of the population and work closely with the international community to access financing.

9. **The World Bank's response to the floods and landslides includes a package of interventions using several instruments to meet Myanmar's reconstruction and recovery needs.** Following a request from the Government, the World Bank provided technical support for the multisectoral PDNA to inform recovery and reconstruction planning. Through the project portfolio, reallocations were made under the National Community Driven Development Project to affected communities and under the Decentralizing Funding to Schools Project to transfer funds to schools ahead of schedule to respond to the disaster impacts on households. Moreover, the World Bank is assisting the GoM in the mobilization of the IDA Immediate Response Mechanism (IRM), which allows countries to access up to five percent of the total undisbursed amount of investment lending portfolio in the country.[15] In line with the PDNA results, the IDA IRM will support the recovery of the agriculture, fisheries, and livestock sectors, financing a positive list of goods, including fertilizer, seeds, animal feed, and fishing gear, in the amount of approximately US$32 million. With a view on the medium- and long-term disaster risks, the World Bank is preparing a separate DRM project, which will focus on building climate and disaster resilience through a range of flood risk management investments.

10. **The Flood and Landslide Emergency Recovery Project responds to the priority sectors and geographic areas identified in the PDNA.** First, the project will help close the financing gap in the transport sector, which was the hardest-hit public sector. It will focus on the geographic areas that experienced the highest damages in the transport sector. Second, livelihood support through labor-intensive rehabilitation and maintenance of rural roads will help alleviate the suffering of the most-affected segments of society with both immediate and long-term benefits of income generation, capacity building, increased connectivity, and business opportunities. Third, the project will support the recovery in the agriculture sector by financing a positive list of goods, including seeds and animal feed, through a contribution to the IDA IRM. The project areas of intervention were selected based on the following criteria: (a) the level of impact sustained as documented by the PDNA, (b) the number of poor and vulnerable people, and (c) consideration of recovery interventions by development partners. The project interventions will focus on the states and regions that experienced the highest per capita damages, including Chin, Rakhine, Ayeyarwady, Sagaing, Magway, Bago, and Yangon. In the preparation of the proposed project, the World Bank is closely cooperating with the ADB and the Japan International Cooperation Agency (JICA) in particular, to avoid overlap and ensure investment synergies.

C. Sectoral and Institutional Context

11. **The transport sector is of critical importance to the country's economic and social development.** Currently, 40 percent of Myanmar's population lives in villages without access to

[15] World Bank Immediate Response Mechanism website: http://www.worldbank.org/ida/immediate-response-mechanism.html.

the most basic of transport links: an all-season road.[16] This isolation means limited access to markets and employment opportunities. Myanmar's public road network comprises 157,059 km across 14 states, with 34,724 km (22 percent) paved. The network includes 39,702 km of highways, expressways, state roads, and regional roads administered by the MOC. A further 18,499 km of urban roads are managed by city and township development committees, while 83,665 km of rural roads fall under the responsibility of the Department of Rural Development (DRD) under the Ministry of Agriculture, Livestock, and Irrigation (MOALI)[17] and the Ministry of Border Affairs. According to the National Transport Development Plan, a strategic goal is to create a sustainable, economical, and efficient sector that ensures the easy flow of goods and services while attracting new commerce and industry. Without much-needed reliable transportation links, agricultural productivity remains low, and access to social services is limited. The low quality of design and construction of roads and management and maintenance of assets contribute to the vulnerability of the transport sector to natural hazards and the impacts of climate change.

12. **At present, there are no safety net programs to help households cope with the increased burden due to the disaster and there is evidence of negative coping mechanisms being adopted.** Recently endorsed policy frameworks developed by the DRD, such as the Rural Development Strategic Framework and the Social Protection Strategic Plan, call for creating seasonal jobs as one of the tactics to increase income-generating opportunities. The plan includes a public employment program, which is one of eight flagship programs and which is intended to offer employment opportunities to poor households and provide vocational education. Labor-intensive programs support the creation of jobs for unskilled workers in rural areas facing temporary or seasonal unemployment while creating and maintaining small-scale community infrastructure. Capacity building for community-based disaster risk management (CBDRM) approaches also rests with the DRD.

13. **The agriculture sector plays an important role in the economy and livelihoods of Myanmar's population.** Overseen by the MOALI, the agriculture sector contributed close to 29 percent of output in 2015/2016. Agriculture employs around 52 percent of the national labor force and provides livelihoods for over 70 percent of the population, which makes it also an important part in the ongoing efforts to reduce poverty. The proposed project supports the recovery in the agriculture sector with a pass-through contribution to the IDA IRM, which will finance goods to help address urgent needs of farmers.

D. Higher Level Objectives to which the Project Contributes

14. **This project will directly contribute to the GoM's recovery vision to promote "a people-centered resilient growth by building back better."**[18] Build-back-better principles will serve as the guiding framework in the implementation of the proposed project. The 'Instructions of the President of Myanmar for Rehabilitation Process' specifically call for social protection interventions to support flood-affected households as a core element of the Government's

[16] Government of Myanmar. 2015. *Post-Disaster Needs Assessment of Floods and Landslides July–September*.
[17] Formerly under the Ministry of Livestock, Fisheries, and Rural Development.
[18] Government of Myanmar. 2015. "Instructions of the President of Myanmar for Rehabilitation Process." Brief.

recovery plan. The project will support the livelihoods of the affected population through labor-intensive rehabilitation of rural roads. The project activities are also in line with the Government's key reform frameworks, including the Framework on Economic and Social Reforms, which aims to achieve sustainable and inclusive growth in Myanmar, and the Rural Development Strategic Framework, which outlines support for rural communities and remote areas.

15. **The project is in accordance with the Myanmar World Bank Group's Systematic Country Diagnostic and Country Partnership Framework 2015–2017 (Report 95998).** These documents acknowledge that Myanmar is one of the world's most vulnerable countries to natural hazards and that disasters are a threat to achieving development goals. They recognize that the poor and vulnerable feel the greatest pressure when food prices fluctuate because of disasters and note that DRM is a critical element for reducing poverty. The framework identifies 'climate change and disaster risk management' as one of the four cross-cutting areas, and improved flood control and the reduction of vulnerability to shocks are included under the main engagement areas for reducing rural poverty.

16. **The project will contribute to the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity in a number of ways.** The improvement of transport conditions translates into better access to social services and to income-generating opportunities. Impact evaluations of rural roads programs illustrate the benefits of rural roads interventions on school attendance, visits to health centers, access to markets, and agricultural productivity. Hence, there is a strong rationale for investing in rural roads as part of a poverty reduction and growth strategy. Moreover, labor-based road construction and maintenance will provide benefits to local people for economic opportunities, employment, and ownership. They give people an opportunity to learn new skills, earn a wage when they are employed, and contribute to less risky coping behaviors after a disaster. Knock-on effects arise when workers set up businesses for themselves by using their earning proceeds, with positive effects on poverty alleviation. Road infrastructure will be prioritized in the poorest areas. Labor-intensive selection criteria will also prioritize poor and vulnerable households. Build-back-better approaches and strengthening disaster and climate resilience aspects in the investments will help sustain the benefits of the investments in the medium and long term.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

17. The project development objective is to support the recovery in priority areas affected by the 2015 floods and landslides in Myanmar and, in the event of another Eligible Crisis or Emergency, to provide immediate and effective response to said Eligible Crisis or Emergency.

Project Beneficiaries

18. The project will benefit the population affected by the 2015 floods and landslides across most-affected states and regions as well as social groups. The project expects to directly benefit approximately 1.1 million beneficiaries. Under Component 1, direct beneficiaries will include some 150,000 inhabitants in Chin and 275,000 people in Rakhine through restored national road

access and a safer road network. Under Component 2, some 679,500 inhabitants of Ayeyarwady, Bago, Magway, Sagaing, and Yangon will benefit from restored rural roads and bridges and in addition will benefit from livelihoods-supporting activities through labor-intensive road works. Under Component 3, some 100,000 members of the farm households,[19] which lost their crops, livestock, and fishery gear as a result of the floods and landslides, will benefit from the project. Vulnerable groups will be targeted as the design will include criteria such as number of poor people and high level of flood impact. Women will represent 50 percent of project beneficiaries.

PDO Level Results Indicators

19. Achievements toward the PDO will be tracked through the following outcome indicators:

(a) Direct project beneficiaries (number), of which female (percentage) [core sector indicator]

(b) Length of road rehabilitated (rural/nonrural)

(c) Number of workdays generated (disaggregated by gender)

III. PROJECT DESCRIPTION

A. Project Components

20. The project consists of five components: (a) Resilient Rehabilitation of National Roads, (b) Resilient Rehabilitation of Rural Roads and Livelihoods Support, (c) Provision of Eligible Goods, (d) Project Management and Knowledge Support, and (e) Contingent Emergency Response.

Component 1: Resilient Rehabilitation of National Roads (US$105 million)

21. The objective of this component is to support the climate-resilient rehabilitation of damaged national road infrastructure. The target areas will benefit from improved connectivity and restored access to markets and social services, which will contribute to the economic growth. The restored roads and bridges will also serve as supply and rescue lines in the event of a disaster. This component will be implemented by the MOC on road segments predominantly in Chin and Rakhine, including the Kalay-Falam-Hakha Road and the Ngathainggyaung-Gwa Road.

- **Rehabilitation and maintenance.** The project will rehabilitate national roads and bridges. Traffic safety facilities will complement the activities. Routine maintenance of the rehabilitated roads will be conducted toward the end of the project.

[19] It is assumed that about 50 percent of these beneficiaries will also benefit from restored and/or improved national and rural roads under Components 1 and 2.

- **Climate resilience.** The project will finance elevating of flood-prone road sections, drainage improvement, slope stabilization, landslide protection, and bio-engineering techniques.

- **Capacity building.** To build the capacity of the MOC in supervision and quality control, the project will finance equipment for technical laboratories.

- **Design and supervision of civil works.** Technical assistance for design, supervision, and quality assurance for the investments will be supported.

Component 2: Resilient Rehabilitation of Rural Roads and Livelihoods Support (US$70 million)

22. The objective of this component is to (i) rehabilitate rural roads that have been destroyed during the floods, and (ii) support livelihoods and create jobs through the use of labor-intensive works, where appropriate. The repairs will indirectly regenerate farmers' agricultural production and increase sustainable access to basic needs and services. The component will be implemented by the DRD in Ayeyarwady, Bago, Magway, Sagaing, and Yangon.

- **Rehabilitation and maintenance.** The rehabilitation of rural roads and bridges through labor-intensive methods will be supported. These works will be complemented with traffic safety measures and routine maintenance to ensure sustainability. The concept of CBDRM will be introduced as part of the maintenance strategy.

- **Climate resilience.** A build-back-better approach will be taken, with sound engineering designs, sufficient drainage, and greening approaches applied to enhance the resilience.

- **Capacity building.** To build the capacity of the DRD in supervision and quality control, the project will finance equipment for technical laboratories and select machinery to support sustainable road maintenance practice and emergency response.

- **Design and supervision of civil works.** Technical assistance will focus on surveys and road designs as well as quality control and supervision of the works.

Component 3: Provision of Eligible Goods (US$15 million)

23. This component will support a pass-through contribution to the IDA IRM response to the 2015 July–September floods and landslides through provision of eligible goods and other technical assistance. It will finance expenditures from an approved list of goods in line with the Contingent Emergency Response Implementation Plan (CERIP) dated June 13, 2016, developed for the IDA IRM activation, and the IDA IRM Operations Manual, developed by the GoM and approved by the World Bank. This component will support the recovery of the agriculture, fisheries, and livestock sectors through essential goods for farm households from disaster-affected regions and states, including storage and construction materials, vehicles, medicines, small industrial machinery, seeds, animal feed, and fuel products. It will not finance any works

or incremental operating costs. This component will be overseen by the Ministry of Planning and Finance (MOPAF) and the MOALI.

Component 4: Project Management and Knowledge Support (US$10 million)

24. This component will support the MOC and DRD in project management and implementation.

- **Project management.** This will include financial management, procurement, capacity-building, coordination, provision of implementation expertise, preparation and monitoring of safeguards instruments, monitoring and evaluation.
- **Knowledge support.** Studies will be included on strengthening disaster and climate resilience and improving road maintenance and technical capacity building for Government staff at the national and local levels and for local contractors. A Strategic Maintenance Framework for Roads and Bridges will be prepared to help the MOC and DRD strengthen the maintenance operations under the country's limited resources. Technical assistance will be provided to help the MOC and DRD review and improve the current Design Standards for Road and Bridge under the climate change context. Innovative approaches such as application of information and communication technology (ICT) or use of geographic information system (GIS) data will be explored.

Component 5: Contingent Emergency Response (US$0)

25. This component will allow for a reallocation of credit proceeds from other components to provide emergency recovery and reconstruction support following any future eligible crisis or emergency. It may finance expenditures on a positive list of goods and/or specific works, goods, services, and operating costs required for given emergency recovery. A CERIP to be developed for the specific eligible disaster will apply to this component, detailing financial management (FM), procurement, safeguard, and any other necessary implementation arrangements.

B. Project Financing

26. The lending instrument will be Investment Project Financing with a five-year implementation period.

Project Cost and Financing

Table 2. Total Cost and Share of IDA Financing by Component

Project Components	Total Cost (US$, millions)	Share of IDA Financing
Component 1: Resilient Rehabilitation of National Roads	105.0	100%
Component 2: Resilient Rehabilitation of Rural Roads and Livelihoods Support	70.0	
Component 3: Provision of Eligible Goods	15.0	
Component 4: Project Management and Knowledge Support	10.0	
Component 5: Contingent Emergency Response	0.0	
Total Project Cost	**200.0***	

Note: * Confirmed national IDA17 funding (US$100 million) plus Crisis Response Window funding (US$100 million).

C. Lessons Learned and Reflected in the Project Design

27. The proposed project draws on the results of the PDNA and incorporates lessons learned from the World Bank's extensive global experience in post-disaster infrastructure reconstruction, including the Pakistan Flood Emergency Cash Transfer Project and the Cambodia Ketsana Emergency Reconstruction and Rehabilitation Project as well as rural transport projects from different geographical regions. National experience, particularly with regard to implementation capacity, has also been evaluated. The main lessons incorporated into project design are as follows:

(a) Streamlined institutional and implementation arrangements are critical in preparing emergency projects. The MOC has experience with project management and implementation under projects financed by the ADB and JICA. The DRD has gained knowledge of World Bank procedures by implementing the World Bank National Community Driven Development Project as well as the National Electrification Project. The project will thus work through departments that have experience with externally financed projects. Where needed, local and international consultants will support implementation. Provision of eligible items under Component 3 will be supported through an experienced third-party agency.

(b) Enhancing disaster and climate resilience of the infrastructure to be rehabilitated is a priority. The proposed project provides an opportunity to design and implement a transport resilience program that will consider both structural and nonstructural measures to climate-proof road infrastructure. A build-back-better approach will be adopted, whereby sound engineering designs will be applied and opportunities to employ bio-engineering and greening approaches will be explored. The MOC and DRD standards will be reviewed and improved, where needed, and the technical capacities of the Government at the central and decentralized levels will be strengthened.

(c) Well-maintained rural roads can provide a cost-effective and sustainable solution to rural access; however, ensuring investment sustainability through sound road maintenance practice can be challenging. Road maintenance is a common challenge for national and local governments because of limited resources. To create local ownership, it is proposed to introduce a community-based approach to routine maintenance which has been successfully implemented in other countries, such as Vietnam and Peru. Such a program will also allow women to be actively involved in routine maintenance activities, develop skills, and earn an income.

(d) Road rehabilitation should take into account a variety of pavement designs. Laterite and other forms of naturally occurring gravel have been widely adopted as a surfacing material for low-cost roads; however, maintenance costs are high, and the material is not always locally available. This project will consider a range of alternative surfacing and paving technologies based upon availability of local resources, geography (flood and landslide risk, steep terrain) and traffic volumes.

Although these options may have a higher initial investment cost, over the whole life cycle of the road, they will prove more durable and need less maintenance and repair.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

28. **Project coordination.** The MOC will oversee overall project coordination and management. The MOC will form a Project Secretariat that will report to the Permanent Secretary of the MOC. It will be headed by a project director and will be supported by consultants as part of project Implementation Support Team (IST). The Project Secretariat will coordinate with other implementation units at the DRD, MOALI, and MOPAF.

29. **Project implementation.** The MOC will be responsible for the implementation of Component 1, and the DRD for the implementation of Component 2. Component Implementation Units (CIUs) will be established for both Component 1 and Component 2. Both CIUs will be led by a director who will be responsible for component management and coordination, as well as procurement and financial management, monitoring and evaluation (M&E), and compliance with environmental and social safeguards. The CIUs will be staffed from the current MOC and DRD officials. The CIUs will be supported by the IST for project management and implementation. Component 3 will follow the implementation arrangements outlined in the CERIP developed for the IDA IRM activation in response to the 2015 floods and landslides. For Component 5, following an eligible adverse natural or man-made event that causes a major disaster, the GoM—through the MOPAF—may request the Bank to reallocate project funds to Component 5 to cover emergency response and recovery costs.

30. **Citizen engagement** will be supported by this project through (a) consultations and citizen participation in project implementation; for example, communities alongside the roads to be rehabilitated under Component 2 will participate in the design, construction, and maintenance of rural roads; (b) transparent grievance redress; (c) communication campaigns and capacity building; and (d) the development of safeguards documents. The preparation of site-specific safeguards instruments and technical documents will collect baseline data for tracking citizen engagement, including issues on the accessibility to different types of roads and participation in labor-intensive work. During project monitoring, feedback will be collected from beneficiaries on project implementation and results and how grievances in relation to the implementation of the project are being addressed.

B. Results Monitoring and Evaluation

31. The project Results Framework (annex 1) forms the basis to track progress of activities to meet the project objective. An M&E system on the project implementation status will be developed and maintained by the Project Secretariat at the MOC. Technical support and training on the M&E system will be provided from budget under Component 4. Information and data collected by the MOC, DRD, MOALI, and MOPAF on implementation pace, efficiency, due processes, and construction quality will feed into the M&E system to help monitor the project's outcomes and impacts. Regular semiannual progress reports in line with the indicators and

milestones will be generated by the Project Secretariat. Regular supervision missions will assess the implementation. Independent third-party monitoring will be considered for activities in Rakhine State. A midterm review of project implementation will take place 20 months after effectiveness of the proposed project.

C. Sustainability

32. The introduction of cost-effective disaster-resilient principles will improve the long-term sustainability of the reconstructed critical public infrastructure. Resilience will be improved through innovative technologies, which will extend road durability. Project activities are part of a broader strategic dialogue on DRM and flood risk management that the World Bank is supporting in Myanmar. To ensure long-term maintenance of the public infrastructure reconstructed under this project, the Government will be required to furnish adequate plans for routine and periodic asset maintenance. Strategic maintenance frameworks will be developed under the project to help the GoM strengthen the maintenance operations under the country's limited resources. Rural rehabilitation and livelihoods supported by Component 2 will provide affected communities with income opportunities and improved capacity for maintenance, while restoring infrastructure. This in turn will support local socioeconomic development, including trade and employment opportunities and access to public services.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

33. **The overall risk for achieving the PDO is rated as Substantial.** Among High risks are Political and Governance, Fiduciary and Institutional Capacity. Overarching governance risks include the fragility of the reform process and limited Government experience with development partners such as the World Bank Group in the last two decades. The project was largely prepared by the previous administration, and ownership and leadership of the new administration will be paramount to a successful emergency operation. To mitigate these risks, regular discussions will be held with the Government, key stakeholders, and DRM champions to ensure continuity and prioritization of the recovery efforts.

34. **Risks related to institutional capacity are High.** For Component 1, while the MOC has experience with projects financed by the ADB, JICA, and other financing institutions, they have no prior project experience with the World Bank. For Component 2, the DRD is implementing two World Bank projects, which could however strain their capacities. Limited capacity in procurement, governance, safeguards, and fiduciary poses a high risk for timely implementation.

35. **A FM assessment was carried out in accordance with OP/BP10.0.** The risks related to FM are (a) limited experience of finance staff in managing externally funded projects; (b) inadequate documentation of policies and procedures; and (c) new activities envisaged to be implemented at a decentralized level, coupled with lack of experience in funding these activities with external funds, potentially increasing the risk of funds misuse. The risks will be mitigated in the following ways: (a) technical support, during implementation, from qualified FM consultants, both local and, potentially, international, which will be provided based on Terms of Reference acceptable to the World Bank; (b) establishment of an acceptable FM Manual, by project

effectiveness, for the project that will include procedures and internal controls designed to prevent and detect potential misuse of funds; (c) training of staff in FM and disbursement when the project becomes effective; (d) annual auditing of the project financial statements; and (e) sustained support and guidance from the task team throughout project duration to assist implementing agencies on specific World Bank policies and procedures.

36. **Risks related to the technical project design are rated as Substantial.** There are inherent risks to the implementation related to (a) the ability to coordinate the proposed investments with local stakeholders; (b) limited knowledge on climate-proofing infrastructure and on lifecycle benefits of higher up-front investments for resilient road design; and (c) the design and construction of public works. To mitigate these risks, additional implementation support and frequent supervision will be provided.

37. **The project was screened for risks from disasters and climate change.** The results suggest a substantial risk to the PDO given the location of the project areas. Myanmar is exposed to a range of natural hazards, including floods, cyclones, earthquakes, landslides, and tsunamis.[20] The country suffers from recurrent floods. In Chin State, saturated or loose soils in hilly areas are vulnerable to slope failures. Predictions indicate that water-related disasters will be exacerbated by climate change and environmental degradation. Potential climate change risks relate to expected changes in precipitation causing increased frequency and intensity of floods and droughts. Temperatures in Myanmar have increased on average by about 0.08°C per decade since 1950, most notably in the northern and central regions. The major risks for project investments are flood- or seismic-related physical damage to infrastructure. Risk-sensitive technical design and implementation will mitigate disaster and climate risks.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

38. The economic evaluation was performed based on the work plan for the national road rehabilitation plans in Chin State (192 km), Rakhine State, and Ayeyarwady Region (80 km) and the rural road rehabilitation plan. The cost-benefit analysis was conducted to calculate the economic internal rate of return (EIRR) and net present value (NPV) of the project. The major economic benefits of the project considered are the direct income impact from the project's activities and travel time saving benefits to passengers. To be conservative (and due to lack of data), the vehicle operating cost saving and generated, or diverted, traffic were not considered in the economic analysis. The economic analysis covers the period of 10 years (2017–2026). Based on the standard conversion factor (SCF) of 0.828 for national roads and 0.879 for rural roads, the EIRR (or the break-even discount rate) is calculated to be 15.40 percent and NPV is US$24.12 million with six percent discount rate according to the World Bank's Technical Note on Discount Rate of January 2016. The sensitivity analysis on various assumptions is illustrated in table 3.

[20] The annual expected losses are approximately US$184.8 million, equivalent to 0.9 percent of the country's 2008 GDP, which were the highest annual expected losses relative to GDP in all Association of Southeast Asian Nations countries. *Source:* World Bank. 2012. *Advancing Disaster Risk Financing and Insurance in ASEAN Member States.* Figures are preliminary estimates and are not based on catastrophic risk modeling.

Table 3. Summary of Economic Analysis

	EIRR (%)	NPV (million US$)
Base case	15.40	24.12
All traffic growth is 0%	11.93	13.89
Average trip distance reduced by 20%	6.04	0.11
Investment cost increases by 30%	4.43	−5.01
Discount rate at 12%	15.40	6.76

B. Technical

39. Project-funded rehabilitation and reconstruction of public infrastructure will reflect build-back-better principles, which include improved designs, sizing, siting, and orientation, with due recognition of affordability and technical viability constraints. Where relevant, rehabilitation will be based upon structural assessments, geological and hydrological surveys, and a catalogue of improved technical measures. Modifications to current designs and structures will be proposed to improve the safety of the population. Technical and operational capacity of implementing agencies will be strengthened through training and support of technical laboratories and quality control, with relevant international good practice being shared.

40. The project will prioritize labor-intensive scheme designs and other creative approaches within the framework of the Bank's procurement procedures to keep the investment costs within a reasonable range without compromising the quality of the works. Rural roads will be rehabilitated to a higher climate-resilient standard using simple and proven standard designs appropriate for labor-based technology, with close supervision of medium-size contractors by the local township engineers with potential support and training from international experts, the CIU, and the IST. The proposed rehabilitation/reconstruction investments comprise about 20–30 percent of the DRD's annual average work program on roads and bridges, which is supervised at the local level.

C. Financial Management

41. **Roles and capacities.** For Component 1, the Finance Director of the Department of Highways (DOH) at the MOC will be part of the FM unit of the CIU and will oversee the FM aspects of Component 1. FM responsibilities of implementing state or region offices of the MOC will be spelled out in the FM Manual. Based on the capacity assessment, the Finance Department and Finance Section of the DOH of the MOC have no direct experience in the FM of externally financed projects. Current loan projects from the ADB, Japan, and Korea are managed by a Finance Unit set up specifically for the projects outside of the Finance Section. Therefore, a qualified local consultant will be required for the duration of the project. For capacity-building purposes, two staff members from the Finance Section of the Roads Department have been assigned to work closely with the consultant. For Component 2, the DRD finance director will be part of the FM unit of the CIU, overseeing the FM aspects. Should the state/region- or township-level DRD offices be involved in the implementation, related FM responsibilities will be spelled out in the FM Manual for the project. The head of Finance and staff at the DRD have experience in overseeing the FM for World Bank-financed projects, including the National Community Driven Development Project and National Electrification Project, as well as for the ADB-

financed projects. However, the staff assigned to this project does not have experience managing FM of an externally financed project. Therefore, local consultant support will be required at least at the initial stage of the project. Both the consultant and DRD staff will be located at the CIU of the DRD and report to the finance director. If deemed necessary, a part-time international FM consultant will assist the CIU in setting up the FM system and provide on-the-job training to local consultants and Government FM staff during the initial period of the project.

42. **FM risks** include (a) limited experience of finance staff in managing externally funded projects; (b) inadequate documentation of policies and procedures; and (c) new activities envisaged to be implemented at a decentralized level, coupled with lack of experience in funding these activities with external funds, potentially increasing the risk of funds misuse. The risks will be mitigated in the following ways: (a) technical support from qualified FM consultants, both local and, potentially, international, which will be provided based on terms of reference (ToR) acceptable to the World Bank; (b) establishment of an acceptable FM Manual for the project that will include procedures and internal controls designed to prevent and detect potential misuse of funds; (c) training of staff; (d) annual auditing of the project financial statements; and (e) sustained support and guidance from the task team throughout project duration to assist implementing agencies on specific World Bank policies and procedures. The FM arrangements will be considered acceptable after these mitigation measures are put in place.

D. Procurement

43. **Applicable Procurement Guidelines and Procedures.** Bank Procurement and Consultant Guidelines, dated January 2011 and revised in July 2014, will apply. The World Bank has streamlined the procurement process for new and ongoing projects in Myanmar, effective February 2016. These streamlined procedures take into account the country situation and capacity and are in line with the World Bank Guidance Note on Projects in Situations of Urgent Need of Assistance or Capacity Constraints, dated April 2013. These new procedures offer simplified procurement arrangements, higher thresholds for shopping, and use of Selection based on the Consultants' Qualifications method as well as select use of tender securities. In addition to the above, the provisions of the IRM Operations Manual agreed between the Bank and Government will be applied for Component 3 and Component 5.

44. **Implementation arrangements**: MOC will be responsible for procurement of goods, works and services under Component 1 and 4. DRD under MOALI will be responsible for procurement under Component 2 and 4. MOPAF will be responsible for the procurement under Component 3, which will finance positive list of goods for the 2015 emergency. MOPAF is in the process of hiring the United Nations Office of Project Services to carry out the procurement of these eligible goods. If and when Component 5 is triggered, procurement arrangements in line with the IRM requirements will be updated, outlined, and agreed with the GoM. Detailed requirements will also be outlined in the CERIP.

45. **Summary of Capacity Assessment.** The World Bank conducted an assessment of procuring entities in January 2016. There is no centralized procurement legal framework and regulatory system in the country, apart from a general arrangement to exercise open competitive tendering as a default method. The Government is in the process of preparing a Procurement Law. MOC and DRD were delegated powers to define their own arrangements. MOC has

prepared an "Executing Works by Contract" Directive dated January 2014 which provides some procedures and key conditions of works contracts. At the central level, both agencies have some procurement experience and knowledge. While MOC has no experience in World Bank procurement guidelines and procedures, DRD has been using the World Bank procurement guidelines and procedures for the National Community Driven Development Project for the past three years. However, DRD capacities are constrained since DRD is handling many projects. DRD proposes to conduct the procurement level at central level for the first 18 months, meanwhile State/Region level staff are trained on-the-job. Afterwards, DRD will decentralize procurement to State and Regional agencies. Capacity of both DRD and MOC to carry out procurement activities is marginally adequate and will be supplemented by external expertise. A significant risk to procurement implementation is the highly centralized procurement approvals from senior management within Government, which causes delays. Back up arrangements for approvals are not in place. Risk mitigation measures include requirements that both CIUs have staff with knowledge of World Bank or international procurement procedures. Steps and timelines for procurement approvals will be agreed upon in the POM. Moreover coordination arrangements and responsibilities for technical inputs need to be clearly stated and approval requirements and staff responsibilities must be explicit for each step. For Component 3, MOPAF does not have the capacity to procure goods under an emergency situation. The Ministry is in the process of hiring United Nations Office of Project Services as an agent to procure the goods required under the emergency.

E. Social (including Safeguards)

46. **Social impacts.** The project will generate positive benefits to disaster-affected people including the poor, women, ethnic minorities, and vulnerable people in the form of improved access to critical infrastructure and services as well as direct income support. Specific investments to be supported under the project will be identified during implementation; however, no significant negative social impact is expected to occur. The project will support small-scale rehabilitation in the same area where the previous infrastructure was located. Because the project will use build-back-better approaches for affected roads and bridges, there is a possibility that some subprojects may entail realignments and cause minor loss of private land or assets. It is expected that ethnic minority communities are present in project areas.

47. The World Bank's OP/BP 4.10 - Indigenous Peoples and OP/BP 4.12 - Involuntary Resettlement are triggered. A Resettlement Policy Framework (RPF) and an Ethnic Minority Planning Framework (EMPF) were prepared by the GoM and attached to the Environmental and Social Management Framework (ESMF). The RPF provides principles and procedures to identify, assess, minimize, and restore loss of private land and other assets—including screening criteria, eligibility criteria, entitlement matrix, and valuation methodology—and organizational arrangements and design criteria to be applied to subprojects to be prepared during the project implementation. The EMPF describes processes and procedures to carry out free, prior, and informed consultations with affected ethnic minority communities, leading to their broad community support to the project and identify negative impacts that may result from the project and opportunities to enhance project benefits, as well as institutional arrangement, monitoring arrangement, and disclosure arrangement. If the project finances any preparatory works that the GoM has already started, due diligence will be conducted of such preceding works and any gaps found will be addressed under the Ethnic Minority Plan and/or Resettlement Action Plan (RAP)

or abbreviated RAP for project sections or through the stand-alone Corrective Action Plan. There is a risk that vulnerable social groups, who are not covered by the EMPF, face difficulties receiving project benefits in a fair and equitable manner. The ESMF includes provisions to ensure that such social groups receive project benefits in a fair and equitable manner.

48. **Gender.** The PDNA highlights impacts on women's lives across different areas, including health, nutrition, livelihoods, assets loss, financial burden, and increase of sexual violence. The PDNA found that overall, women are more negatively affected than men. The loss of food stocks and livestock, inundation of farmland and subsequent loss of agricultural labor, and the inability to look for alternative livelihoods because of the high burden of care work means that they are under considerable burden to provide food and nutrition for their families, while they have far fewer resources and options for alternative livelihoods when compared with men. For both Component 1 and Component 2, gender considerations will be taken into account, particularly related to road access, service provision, road safety, sexual health and safety, child labor, contracting, and equal-pay opportunities. The safeguards instruments, POM, technical designs, and capacity building for staff and contractors will include specific actions to mitigate specific risks and concerns and use opportunities for ensuring the well-being and equal opportunities of men and women to benefit from the project investments. Under Component 2, consultations, training, and targeting can enhance participation of women and their ability to benefit from the labor-intensive programs. Sustainable maintenance is expected to generate employment opportunities for women living in communities along roads and bridges under rehabilitation. Under Component 3, the distribution of goods to farm households will equally benefit women and men.

F. Environment (including Safeguards)

49. Environmental safeguards policies applicable to the project include OP 4.01 - Environmental Assessment, OP 4.04 - Natural Habitats, OP/BP 4.36 - Forests, and OP 4.11 - Physical Cultural Resources. The project is classified as Category B; Category A[21] subprojects will be excluded from project financing. The rehabilitation and maintenance of damaged national and rural roads and bridges are not expected to cause significant environmental impacts that are sensitive, irreversible, and unprecedented. Moreover, mitigation measures for project-supported activities are expected to be readily available. The project will not finance new infrastructure or measures beyond rehabilitation, maintenance, and build-back-better approaches. The rehabilitation works will be generally implemented in the existing road's right-of-ways and only in certain areas will the works entail technically simple realignments and strategic widening of the road to two lanes.

50. Given that specific subprojects and locations are not known at the time of appraisal, the GoM prepared an ESMF that provides policies, guidelines, and procedures to ensure that the

[21] According to the World Bank classification, Category A projects are those that will likely produce impacts that are irreversible, sensitive, diverse, unprecedented, and on a scale beyond the project area. Category B projects have "potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects."

project is implemented in an environmentally and socially sustainable manner and in line with the applicable World Bank safeguard policies and Government regulation. The implementation agencies and their environmental and social safeguard specialists will screen each subproject, confirm categorization of the project, and propose the type of safeguards instruments required. The type of expected environmental instruments expected include Environmental and Social Impacts Assessment, Environmental and Social Management Plan, and Environmental Codes of Practice (ECOP). The safeguards documents were disclosed on the MOC and DRD websites on March 16, 2016 and April 1, 2016, respectively, and on the World Bank external website on March 11, 2016 in English and March 31, 2016 in the Myanmar language. The GoM carried out three rounds of public consultation meetings on the draft ESMF in Bago on April 1, 2016, in Hakha (Chin State) on March 29, 2016, and in Yangon on May 23, 2016. A summary of the results of the public consultation meetings is included in the revised ESMF, which was disclosed to the public on June 1, 2016, in English, and on June 2, 2016, in the Myanmar language.

51. The project will finance analytical work (for example, surveys, landslide risk assessments, feasibility studies, and environmental and social instruments) to support the design and location of the investments and minimize negative environmental impacts. The project will support build-back-better approaches, which are expected to positively contribute to sustainability of investment through integration of resilient and innovative technologies for road infrastructure.

G. World Bank Grievance Redress

52. A grievance redress mechanism (GRM) will be developed before effectiveness by the CIUs with adequate resources, clear roles and responsibilities, procedures, and guidelines. The objective of the GRM is to receive and address communities request and/or complaints relating to project implementation. Where possible, the GRM will build on existing local institutions at the Village Committees/Township levels—special emphasis will be given to the existing GRM created under the National Community Driven Development Project in Myanmar. An independent grievance redress committee will be created where there is no suitable local institution to carry out the GRM functions. A communication plan will be developed to facilitate the community's understanding of the GRM functions and enable access to it. Channels will be developed to allow for community monitoring and evaluation of the construction process through means such as public hearings or ICT-enabled citizen feedback platforms.

53. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring

Myanmar:

Flood and Landslide Emergency Recovery Project (P158194)

Results Framework

Project Development Objectives

PDO Statement

The project development objective is to support the recovery in priority areas affected by the 2015 floods and landslides in Myanmar and, in the event of another Eligible Crisis or Emergency, to provide immediate and effective response to said Eligible Crisis or Emergency.

These results are at	Project Level

Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values					
		YR1	YR2	YR3	YR4	YR5	End Target
Direct project beneficiaries (Number) - (Core)	0.00	90,000.00	450,000.00	900,000.00	1,100,000.00	1,154,500.00	1,154,500.00
Female beneficiaries (Percentage - Sub-Type: Supplemental) - (Core)	0.00	50.00	50.00	50.00	50.00	50.00	50.00
Length of road rehabilitated (rural/non-rural) (Kilometers)	0.00	50.00	165.00	300.00	460.00	555.00	555.00
Number of workdays generated (Number)	0.00	57,000.00	255,000.00	460,000.00	730,000.00	865,000.00	865,000.00
Workdays generated by women	0.00	50.00	50.00	50.00	50.00	50.00	50.00

(Percentage - Sub-Type: Supplemental)							

Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values					
		YR1	YR2	YR3	YR4	YR5	End Target
Roads rehabilitated, Non-rural (Kilometers) - (Core)	0.00	10.00	45.00	90.00	120.00	155.00	155.00
Improved disaster and climate resilient designs and standards for national roads developed (Yes/No)	No	No	No	Yes	Yes	Yes	Yes
Roads rehabilitated, Rural (Kilometers) - (Core)	0.00	40.00	160.00	320.00	400.00	400.00	400.00
Length of road maintained (rural) (Kilometers)	0.00	0.00	0.00	40.00	160.00	300.00	300.00
Goods procured and distributed as outlined in the CERIP (Yes/No)	No	Yes	Yes	Yes	Yes	Yes	Yes
Grievances registered related to delivery of project benefits addressed (%) (Percentage)	0.00	60.00	75.00	85.00	95.00	95.00	95.00

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Direct project beneficiaries	Direct beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization program; families that have a new piped water connection). Please note that this indicator requires supplemental information. Supplemental Value: Female beneficiaries (percentage). Based on the assessment and definition of direct project beneficiaries, specify what proportion of the direct project beneficiaries are female.	Annually	Construction and project monitoring report	MOC and DRD CIUs
Female beneficiaries	Based on the assessment and definition of direct project beneficiaries, specify what percentage of the beneficiaries are female.	Annually	Construction and monitoring reports	MOC and DRD CIUs
Length of road rehabilitated (rural/non-rural)	Kilometers of national and rural roads reopened to motorized traffic, rehabilitated, or upgraded under the project.	Annually	Construction and project monitoring reports	MOC and DRD CIUs
Number of workdays generated	Number of workdays generated through the labor-intensive work programs under the project.	Annually	Construction and project monitoring reports	DRD CIU
Workdays generated by women	Percentage of workdays generated by women through the labor-intensive work programs under the project.	Annually	Construction and project monitoring reports	DRD CIU

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Roads rehabilitated, Non-rural	Kilometers of all non-rural roads reopened to motorized traffic, rehabilitated, or upgraded under the project. Non-rural roads are roads functionally classified in various countries as Trunk or Primary,	Bi-annually	Construction and Project Monitoring Reports	MOC CIU

	Secondary or Link roads, or sometimes Tertiary roads. Typically, non-rural roads connect urban centers/ towns/ settlements of more than 5,000 inhabitants to each other or to higher classes of road, market towns and urban centers. Urban roads are included in non-rural roads.			
Improved disaster and climate resilient designs and standards for national roads developed	Disaster- and climate-resilient design standard for national roads improved/ developed by the MOC under Component 1 investments taking into account climate change factors. Improved disaster- and climate-resilient designs and standards for national roads developed means that selected national roads financed under the project will be built to higher engineering standards offering, among others, increased flood and landslide protection. It is anticipated that these improved road designs and standards will form good practice for construction of national highways in mountainous areas beyond the life of the project.	At project completion	Project monitoring reports	MOC CIU
Roads rehabilitated, Rural	Kilometers of all rural roads reopened to motorized traffic, rehabilitated, or upgraded under the project. Rural roads are roads functionally classified in various countries below Trunk or Primary, Secondary or Link roads, or sometimes Tertiary roads. Such roads are often described as rural access, feeder, market, agricultural, irrigation, forestry or community roads. Typically, rural roads connect small urban centers/ towns/ settlements of less than 2,000 to 5,000 inhabitants to each other or to higher classes of road, market towns and urban centers.	Bi-annually	Construction and project monitoring reports	DRD CIU
Length of road maintained (rural)	Length of road maintained (rural) through the Component 2 investments.	Bi-annually	Construction and project monitoring reports	DRD CIU
Goods procured and distributed as outlined in the CERIP	Procurement and distribution of goods as described in the IDA IRM Contingent Emergency Response Implementation Plan (CERIP), developed for the response to the 2015 floods and landslides.	Bi-annually	MOPAF financial and implementation reports for the IRM	MOPAF and MOALI
Grievances registered related to delivery of project benefits addressed (%)	This indicator measures the transparency and accountability mechanisms established by the project so the target beneficiaries have trust in the process and are willing to participate, and feel that their grievances are attended to promptly. It is understood that local sensitivities and tensions will not allow grievance or redress mechanisms to be established in all projects.	Bi-annually	Construction and project monitoring reports	MOC and DRD CIUs

Annex 2: Detailed Project Description

Myanmar: Flood and Landslide Emergency Recovery Project

Component 1: Resilient Rehabilitation of National Roads (US$105 million)

1. The objective of this component is to support the climate-resilient rehabilitation and maintenance of selected segments of damaged national road infrastructure. The segments of the national road infrastructure to be rehabilitated under the project will be selected based on a corridor approach to provide better connectivity between townships to boost shared prosperity among regions in Myanmar. The affected areas will benefit from the restored access to markets thereby increasing the economic growth and access to health and education services. The restoration of roads will also serve as supply and rescue lines in the event of a disaster. This component will be implemented on road segments predominantly in Chin and Rakhine, including the Kalay-Falam-Hakha Road and the Ngathainggyaung-Gwa Road.

2. **Rehabilitation and maintenance - reconstruction of damaged roads and bridges.** Long periods of limited investments in maintenance have deteriorated the condition of critical road infrastructure. For example, in Chin State, long-period and heavy rain between July and September 2015 caused serious damages to many sections of the road, with traffic interrupted for more than a month. Critical sections of the national roads will be rehabilitated/reconstructed with designs to withstand floods and landslides.

3. **Drainage systems.** National roads have shortages of cross-road culverts and longitudinal ditches. Water flows and inadequate drainage cause damage to the road sections. The drainage system will be improved, for example, by adding culverts and/or widening the existing culverts to cope with the required drainage capacity. In addition to building sufficient drainage capacity, masonry and/or concrete structure will be applied for sections with steep slopes.

4. **Road pavement/bridge improvement.** The national road in the mountainous areas in Chin and Rakhine is built from soil excavated from its mountain, with some sections of the road pavement strengthened by penetration macadam. It is vulnerable to rain with high flow pattern causing erosion to both the road surface and the road embankment. The conditions of the current road surface make travel difficult and lengthy. Penetration macadam is to be applied for sections where the road embankments have already been stabilized, while concrete is to be used for sections with small-radius curves. Widening the road to two-lane embankment and eradication of small-radius curves are needed to cope with the increasing traffic while making travel safe.

5. **Traffic safety.** In addition to widening of the road sections, traffic safety facilities will be financed, such as evacuation road section, safety mirrors, guard rails, and retaining walls.

6. **Maintenance.** Toward the completion of the investments, maintenance of the rehabilitated roads will be supported. Technical assistance will support the improvement of road asset management and maintenance practice.

7. **Climate resilience.** The project will finance drainage improvement, slope stabilization, landslide protection, and bio-engineering techniques. Slopes along corridors were seriously damaged because of long-lasting and heavy rains causing soil to fully saturate and lose

consistence. Slope stabilization and landslide protection are required to increase resilience and avoid future damage. Bio-engineering solutions such as the use of gabion walls and vegetation to reduce landslide risks and tree planting along roads to reduce flood impact on both the shoulder and the road surface will be considered where relevant.

8. **Capacity building.** To build the capacity of the MOC in supervision and quality control, the project will finance equipment for technical laboratories to ensure quality supervision and maintenance of the construction.

9. **Design and supervision of civil works.** To ensure the quality of the built infrastructure under the component, the project will finance the development of geological and hydrological surveys and detailed designs, technical and operational capacity building at the national and local level, quality control, and supervision. International consultants will be hired to prepare a detailed design document as well as to perform the supervision of works, with a standard quality control system to be set up.

10. **Geological and hydrological surveys, detailed design, and supervision.** International experts will be hired by the MOC to perform this contract. The tasks covered under this activity will include (a) conducting a detailed geotechnical and hydrological survey/investigations; (b) proposing strategic technical solutions for landslide/bank protection under Myanmar conditions; (c) preparing detailed engineering design; (d) preparing packaging and bidding documents; and (e) performing supervision for the works.

11. A quality control system is required to be set up to ensure the quality of both detailed design document and the works performed on-site. It will include staffing with a highly experienced specialist (for both design and supervision), required certified laboratory testing abilities including equipment (for supervision), and an efficient reporting mechanism. This arrangement will be provided by the consultant in their technical proposal during the bid and will be carefully evaluated by the MOC's evaluation team.

12. **Project readiness.** To enhance project readiness, the project will be implemented under a two-stage approach. Stage 1 will cover works with simple design while Stage 2 will cover works that require comprehensive and detailed geotechnical and hydrological surveys. Criteria to identify Stage 1 works are (a) simple level of design that does not require a detailed geotechnical/soil/hydrological investigation; (b) permanent works, not maintenance; and (c) neither involuntary resettlement required nor significant environmental impacts caused. Detailed design document for Stage 1 works will be prepared by the MOC and contractors will be selected under National Competitive Bidding process. The MOC will also be responsible for the supervision of works with possible assistance from the international technical specialist hired under Component 4. Cost for Stage 1 works will not exceed US$5 million including contingency.

Component 2: Resilient Rehabilitation of Rural Roads and Livelihoods Support (US$70 million)

13. The objective of this component is to (a) rehabilitate rural roads that have been destroyed during the floods and (b) support livelihoods and create jobs through the use of labor-intensive

works, where appropriate. There is a need to get people back to work as a means of social protection to avoid exacerbating existing poverty in many of the affected areas. In parallel, efforts are needed to rehabilitate rural transport infrastructure as a way to increase accessibility. Where appropriate, the works will use labor-intensive methods to support livelihoods and create jobs while simultaneously repairing the transport infrastructure and increasing access to basic services. This component will be implemented in Ayeyarwady, Bago Magway, Sagaing, and Yangon.

14. **Rehabilitation and maintenance.** Rehabilitation of rural roads and bridges will create jobs while repairing infrastructure, indirectly regenerating farmers' agricultural production and increasing sustainable access to basic needs and services. Improved roads and better accessibility from their villages to basic services will benefit people, especially the poor. Improvements to local roads are also critical for the agriculture sector as local roads improve linkages between farms and markets and help realize the full potential of the investment for the rural communities and the economy at large. The rehabilitation of roads will be accompanied by routine maintenance to ensure the investment sustainability. The concept of CBDRM will be introduced as part of the maintenance strategy. Traffic safety facilities will complement the investments.

15. **Reconstruction of damaged roads and bridges.** The majority of rural roads are earthen and narrow. They are characterized by steep slopes in mountainous areas, and in low-lying areas, they are often below flood levels, making year-round travel perilous. The 2015 floods and landslides further worsened the road conditions, restricting the delivery of emergency supplies and hampering livelihood recovery efforts for the most-affected communities. The scope of works will include repair and upgrade provision of drainage systems and use of appropriate pavement options. Specific criteria for selection of the rural roads will be defined in the POM and will consider (a) roads connecting villages to a road of a higher category; (b) roads connecting villages of more than 100 households; (c) roads connecting villages to schools, clinics, and local markets; (d) damage severity, and (e) poverty reduction efforts. A build-back-better approach will be taken, whereby sound engineering designs will be applied to enhance the resilience to natural hazards.

16. **Labor-based methods.** Local labor force and local material will be used, creating employment opportunities and income for men and women from disaster-affected communities. The process of rehabilitation of rural roads will generate unskilled and skilled employment opportunities, providing income opportunities for local families. Employment in this kind of works is common for women, particularly in rural areas during the agricultural off-season. Wage setting close to or just under the minimum wage level will facilitate self-targeting of the poorest families in the communities. Men and women will receive the same wage for the same type of work.

17. Labor-based methods involve the use of an appropriate mix of labor and equipment[22] in the rehabilitation of roads. Preference is commonly made for the use of light construction equipment for such work activities that cannot be replaced by labor. This will maximize the

[22] Petts, Robert. 2012. *Handbook of Intermediate Equipment for Road Works in Emerging Economies (Selection and Costing)*. Intech Associates. U.K.

generation of temporary employment for the men and women from the most-affected communities and ensure the use of local contractors to further support the local economy. Using labor-based work methods, wages can account for some 20–50 percent of the total project expenditure in comparison to a wage component of less than 10 percent when relying on conventional equipment-based work methods.[23] In routine maintenance of such roads, the wage component can be as high as 80 percent, resulting in a significant cash injection into the local economy.

18. **Road identification and rehabilitation.** The prioritization methodology and implementation strategy are designed to directly contribute to the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity; the project will target those areas and communities that have been most affected by floods and landslides and are also classified as the most vulnerable. The DRD compiled an inventory of damaged roads, bridges, and culverts for each state/region that is part of the project. To ensure that the component benefits the livelihoods of the poorest and most vulnerable, the allocation of funds to the states/regions will be ranked based upon the relative impact of the floods and landslides on the population, poverty, rural access, and disaster risk. A long list of roads to be rehabilitated in each state/region consisting of critical links and areas in need of spot improvement has been established. This long list has been screened to identify a number of high-priority roads to be rehabilitated in the first 18 months. A cost-effectiveness analysis was applied to confirm eligibility. This program will focus on re-establishing connectivity and provision of basic access.

19. A detailed consultative planning method will be used to define the second- to fifth-year road rehabilitation works program of the project, focusing on permanent hazard resilient reconstruction to provide road access between villages and the national road network by developing cost-effective, coherent networks with good connectivity. The works will include rehabilitating and upgrading economically and socially justified roads to a sealed standard, which can include concrete and bitumen. Selected roads will be subjected to a multicriteria analysis, which will include vulnerability of households; access to the road network; and access to schools, health facilities, and markets and disaster risk. As part of the prioritization and planning, technical staff at the central and state/region level will be trained in the use of GIS, to facilitate the mapping of the road network and use accessibility criteria to highlight prioritized roads. This also includes the use of Global Positioning System to properly map road alignments, bridges, and other drainage structures, as well as location of schools, health facilities, and local markets.

20. **Road pavement.** Surface treatment options will be selected based upon cost-effectiveness analysis making use of current design standards of the DRD for earth, kankar, macadam, gravel, concrete roads, and bituminous emulsion treatment while trying to maximize the life cycle and minimize routine maintenance requirements. Trial road section will be constructed to evaluate resilience and cost-effectiveness. An evaluation report on the performance of the surface options will be prepared.

[23] *Construction of Low Volume Sealed Roads - Good Practice Guide to Labour-based Methods*. International Labour Organization. 2013.

21. Road safety will be an integral part of the rehabilitation to reduce injuries, particularly in the proximity of schools and on road sections within communities. Works will include installation of guardrails in dangerous sections, traffic calming measures, and signboards in villages, schools, and intersections. International best practice will be shared, in particular from research programs in the region that have studied appropriate design and construction of low-volume rural roads.

22. Routine and periodic maintenance is not a common practice in Myanmar. Insufficient budget is allocated to maintenance, and there is limited experience in either periodic or routine maintenance schemes. International experience shows that applying maintenance will extend the lifetime of the road and therefore drastically reduce the need for constant rehabilitation of roads damaged by floods, landslides, or other reasons such as overloading. The rehabilitation of roads will be complemented by routine maintenance of the road network to ensure connectivity and year-round access are maintained through the project life. Permanent routine maintenance will be performed by communities living alongside the rehabilitated roads, organized in 'maintenance groups'. Special attention will be granted to the gender dimension because routine maintenance contracts could offer employment opportunities to poor women living in the communities beside the roads. The concept of CBDRM will be introduced as an integral part of the maintenance approach.

23. **Climate resilience.** A build-back-better approach will be taken, with sound engineering designs, sufficient drainage, and greening approaches applied to enhance the resilience to natural hazards. Bio-engineering solutions will be an important other aspect such as the use of gabion walls and vegetation to reduce landslide risks and tree planting along roads to reduce flood impact on both the shoulder and the road surface**.**

24. **Capacity building.** To build the capacity of the DRD in supervision and quality control, the project will finance equipment for technical laboratories and select machinery to support sustainable road maintenance practice and emergency response. Technical and operational capacity building will be provided to national and local Government staff and local contractors in the implementation and supervision of infrastructure construction and application of improved road and drainage designs. District- and township-level engineers, supervisors, and other technical staff from the DRD will be trained in the use of the standard design manual and supervision of the road rehabilitation to ensure that these norms and construction techniques are properly applied.

25. **Design and supervision of civil works.** Technical assistance will focus on surveys and road designs as well as quality control and supervision of the works. A review of the current road designs revealed that significant improvements can be made to ensure disaster-resilient roads, which can withstand floods and which will not be completely damaged in the event of landslides or seismic movements. Where relevant, hydrological surveys will be conducted to determine flood levels to inform the design. The project will ensure that sufficient supervision will be mobilized to ensure the quality control of the roads and structures to be rehabilitated, either by international consultants hired by the DRD, as detailed above, as well as by separate assessments to review the quality control for the reconstruction. To this extent, the DRD will contract international consultants with relevant expertise to (a) prepare detailed geotechnical and

hydrological surveys/investigations; (b) prepare detailed engineering designs; (c) prepare packaging and bidding documents; and (d) perform supervision of the works.

Component 3: Provision of Eligible Goods (US$15 million)

26. This component will support a pass-through contribution to the IDA IRM response to the 2015 July–September floods and landslides through provision of eligible goods and other technical assistance. It will finance expenditures from an approved list of goods in line with the Contingent Emergency Response Implementation Plan (CERIP), developed for the IDA IRM activation, and the IDA IRM Operations Manual, developed by the GoM and approved by the World Bank. The implementation of this component is overseen by the MOPAF and the MOALI.

27. In line with the PDNA results, the IDA IRM will support the recovery of the agriculture, fisheries, and livestock sectors by financing essential goods for farm households that lost their crops, livestock, and fishery gears and equipment as a result of the floods and landslides across disaster-affected states and regions, such as storage and construction materials, small industrial machinery, seeds, animal feed, fuel products, and non-works-related operating costs.

28. In preparation of the use of IDA IRM, (a) the IDA IRM Operations Manual was developed by the Ministry of Finance in consultation with the World Bank and approved by the Government's IRM Coordination Committee in October 2015; (b) a national authority for IDA IRM (the IRM Coordination Committee) was established as mandated by a Government Decree 96/2015 of September 8, 2015; and (c) Contingent Emergency Response Components have been included in a number of active projects.

29. On June 3, 2016, the Government submitted an IDA IRM activation request in the amount of US$32 million to the World Bank together with supporting documents, including (a) a copy of the Declaration of Natural Disaster Affected Areas as stipulated by Chapter 5, Article 11, of the Natural Disaster Management Law; (b) a copy of the PDNA conducted in October 2015, which details the damages and losses incurred as well as expected recovery and reconstruction needs; and (c) a CERIP dated June 13, 2016, which includes a list of goods and operating expenditures (see table 2.1) to be financed for addressing the emergency response and recovery efforts, with related implementation arrangements. In the IDA IRM activation request, MOPAF requested the reallocation of US$32 million from four active World Bank projects (Agricultural Development Support Project, Essential Health Services Access Project, Ayeyarwady Integrated River Basin Management Project, and National Community Driven Development Project) to co-finance the list of eligible expenditures (see Table 2.1) and related operating costs. In line with the IDA IRM Guidance Note of June 2015, the World Bank accepted this activation request and reallocated requested funds on June 15, 2016. Upon effectiveness of the proposed project, funds under Component 3 will be available to co-finance the list of eligible expenditures.

30. In line with the disbursement conditions, applicable safeguards instruments necessary for the expenditures to be financed under the CERIP have been developed, namely an ECOP has been prepared for the positive list of goods to be financed under the IDA IRM, which is included

in the CERIP. The concerned beneficiary line ministry has adequate staff and resources to ensure compliance with the safeguards arrangements.

Table 2.1. IRM: Eligible Goods under Component 3 of the Project

Compound fertilizers
Mobile seed plants
Hermetic seal bags and accessories
Seeds and seedlings for horticulture crops
Moisture meters
Cold storage facilities equipment
Combine harvesters
Tractors and small-scale equipment (such as ploughs, harrows, seeding machines, rotators)
Post-harvest dryers
Shallow tube wells
Water pumps
Animal feed
Animal drugs
Equipment for land survey teams (such as measuring equipment and software including laptops, Real Time Kinematic (RTK) Global Positioning System (GPS), total station, power generators)
Bee-hives
Vehicles (including vehicles for land survey, pick up, and transportation vehicles)
Motorbikes
Fuel (including fuel for vehicles, power generators, and back hoe)
Fishing gears
Boats
Fish seeds
Back hoe for pond renovation
Fish fingerlings
Shrimp P Larvae

Component 4: Project Management and Knowledge Support (US$10 million)

31. The objective of this component is to provide institutional support and capacity development for project management, coordination, implementation, and M&E. It will cover support for (a) FM and procurement management; (b) environmental and social safeguards management; and (c) M&E activities at the overall project level, including project reports and midterm review and cost of audits. It also includes the cost of high level international expertise to be recruited on a competitive basis to staff the implementation support team (IST), cost of training programs, and cost of national staff and consultants.

32. As part of knowledge support, the project will finance studies and capacity building in the transport sector, including contribution to rapid response in case of disaster, decentralization aspects, sustainable road maintenance strategies, and community-based approaches for rural roads maintenance. A Strategic Maintenance Framework for Roads and Bridges will be prepared to help the MOC and DRD strengthen the maintenance operations under the country's limited

resources. The framework will provide guidance on (a) how to use the current limited allocated maintenance funds more efficiently and effectively and (b) how to prepare a road map for the future development of a road maintenance fund taking into account the lessons and experiences from other countries (Lao People's Democratic Republic, Vietnam, and so on). During project implementation, innovative approaches such as application of ICT or use of GIS data will be explored. Technical assistance will be provided to help the MOC and DRD review and improve the current design standards for roads and bridges under the climate change context. Furthermore, a decentralization action plan and an emergency response plan will be prepared for the road sector. Training and capacity building will be provided on the use of these studies, frameworks, and designs.

Component 5: Contingent Emergency Response (US$0)

33. This component allows for a rapid reallocation of credit proceeds from other components to provide emergency recovery and reconstruction support following any future eligible crisis or emergency. It may finance expenditures on a positive list of goods and/or specific works, services, and emergency operation costs required for the specific emergency recovery. A separate CERIP will be developed for any activities under this component, detailing FM, procurement, safeguard, and any other necessary implementation arrangements in line with the IDA IRM Operations Manual. The Financing Agreement for the proposed project defines the eligibility criteria and disbursement arrangements for triggering and financing activities under this Component.

Annex 3: Implementation Arrangements

Myanmar: Flood and Landslide Emergency Recovery Project

Project Implementation Arrangements

1. A POM will detail the institutional and implementation arrangements. The implementation of Component 3 and Component 5 (if activated) is guided by the IDA IRM Operations Manual and the CERIP(s) developed in accordance with that manual.

Overall Organization

2. The organizational chart for the project presented in Figure 3.1, is based on discussions with the heads of three ministries involved (the MOC, MOPAF, and MOALI) and shows the proposed institutional setup, described below.

Overall Institutional Arrangements

3. **Project coordination and management.** The MOC will oversee overall project coordination and management. The MOC will form a Project Secretariat to coordinate with project agencies at the MOALI and MOPAF. The Project Secretariat will report to the permanent secretary of the MOC. It will be headed by a project director, and will be supported by consultants as part of the project IST. Biannual reports on the overall project implementation status will be prepared by the Project Secretariat with support of the IST. Information and data to prepare this report will be provided by the CIUs under the project components.

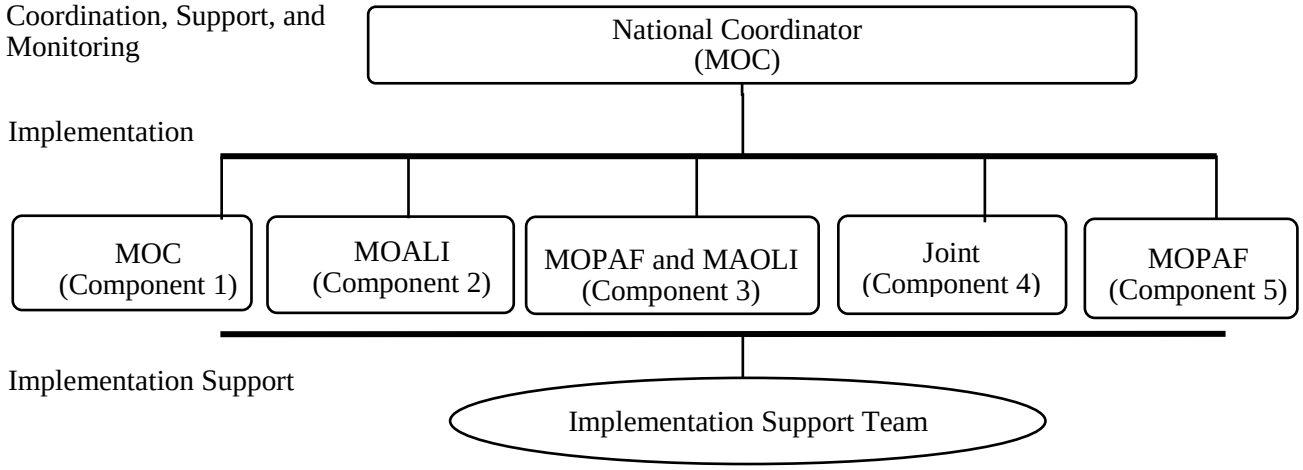
4. **Project implementation.** The MOC will be responsible for the implementation of Component 1 and the DRD for implementation of Component 2. CIUs will be established for Component 1 and Component 2. Both CIUs will be led by a director who will be responsible for component management and coordination, as well as procurement and financial management, M&E, and compliance with environmental and social safeguards. The CIUs will be respectively staffed from the current MOC and DRD department staff and consultants who will be hired under the project as needed. The CIUs will conduct frequent implementation support missions at the state and townships level, as needed.

5. **IST.** The project will work through existing implementation mechanisms or units of the line ministries with the support of a limited number of international consultants or advisers forming a project IST. The Project Secretariat and the CIUs will be supported by the IST in project implementation. Project funds will be made available for the required capacity-building, equipment, and incremental operating costs, as well as for recruitment of nongovernment staff to support (a) technical coordination and capacity building; (b) FM; (c) procurement; (d) social and environmental safeguards compliance; (e) M&E and project audits; (f) training, communications, and outreach; (g) translation; and (h) administrative or secretarial support. One international procurement consultant will be hired to support both the MOC and DRD.

6. The IST will include (a) an international implementation specialist (IST manager) to support the project coordinator and the implementing agencies; (b) an experienced international procurement adviser; (c) a project accountant; (d) M&E experts; and (e) an international

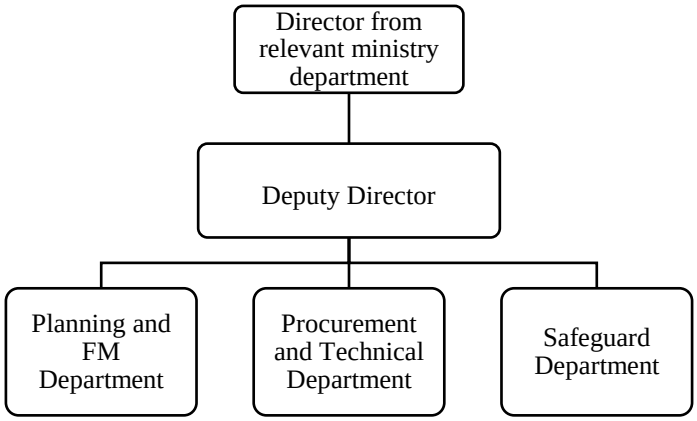
safeguards specialist. All these international specialists recruited competitively under project financing will work with national counterparts and carry out training programs and on-the-job training to ensure know-how transfer, especially on World Bank procedures and guidelines. At the midterm review, practicality of this capacity-building approach will be assessed.

Figure 3.1. Overall Institutional and Implementation Structure



7. Figure 3.2 shows the proposed setup within the CIUs.

Figure 3.2. CIU Organization



Component 1: Resilient Rehabilitation of National Roads

8. Component 1 will be implemented by the MOC, which will provide the final approval for project documents and activities, including (a) the Annual Budget Plan; (b) the implementation and Procurement Plan; (c) bidding documents; and (d) bid evaluation reports. The MOC will establish a CIU to implement the component.

9. A director will lead the CIU. Currently, the chief engineer of Chin State at the MOC headquarters in Nay Pyi Taw is appointed as the CIU director. The director will be responsible for component management and technical coordination, as well as procurement and FM, M&E, and compliance with environmental and social safeguards for all component activities.

10. The CIU will be staffed with the current MOC staff. Project funds will be made available for the required equipment and incremental operating costs, as well as for recruitment of consultants to support (a) technical coordination; (b) FM; (c) procurement; (d) social and environmental safeguards compliance; (e) M&E; (f) training, communications, and outreach; (g) translation; and (h) administrative/secretarial support. The CIU Headquarter Office will be located in Nay Pyi Taw.

11. The CIU will monitor progress against the agreed performance indicators and produce periodic progress reports. It will produce the data for the project indicators of the Results Framework on an annual basis as well as for the midterm review and at project completion. It will discuss project progress and performance based on the indicators from one year to another. During implementation, the CIU will recruit dedicated staff to monitor project progress and update the indicators.

12. The project sites will be far from the CIU Headquarter Office in Nay Pyi Taw. It is therefore necessary to have CIU State Offices (SOs) located at project sites in each state. These CIU SOs will be responsible for day-to-day contract management on-site as well as the reporting function to the CIU headquarters. They also coordinate with the local state authority to identify issues arisen on sites and propose solutions for the CIU and/ or higher level of management. The CIU SOs will be set up by the CIU director, in consultation and agreement with the project director.

Table 3.1. Component 1 - Summary of Organizational Responsibilities

Agency	Reporting Relationship	Tasks
RCC	President's Office	• Develop and monitor the recovery strategy • Run the Recovery Coordination Center • Provide strategic guidance to project stakeholders
MOC	RCC	• Overall project coordination and management • Implementation of Component 1 • Approve the Annual Budget Plan • Approve the Procurement Plan • Approve bidding documents and Bids Evaluation Report • Approve contract changes amount in-aggregate exceeding 15% contract price
Project Secretariat	RCC/MOC	• Project coordination and management • Perform coordination tasks among project agencies • Prepare biannual reports on overall project implementation status for the GoM and World Bank Group • Prepare midterm review report
CIU	MOC	• Component implementing agency • Prepare and submit required documents to the MOC for approval • Prepare bidding documents/bid evaluation reports • Carry out the procurement process • Sign contracts with contractors/consultants • Make payment to contractors/consultants • Approve contract changes amount in-aggregate less than 15% contract price • Prepare periodic component Implementation Status and Results Reports and send to the MOC and World Bank

		• Support CIU SO as requested
CIU SO	CIU	• Coordinate with the local state authority to identify issues that arise on sites • Propose solutions to the CIU/MOC • Carry out day-to-day contract management for both works and consultancy services • Certify competed works quantity for payment to send to the CIU • Prepare request for contract changes • Prepare monthly progress reports and send to the CIU

Component 2: Resilient Rehabilitation of Rural Roads and Livelihoods Support

13. The MOALI will establish its CIU within the DRD to implement the component on its behalf. The DRD CIU will be led by the director of the Roads and Bridges Department who will be responsible for component management and technical coordination, as well as procurement and FM, M&E, and compliance with environmental and social safeguards for all component activities. The CIU staff will support (a) technical coordination; (b) FM; (c) procurement; (d) social and environmental safeguards compliance; (e) M&E; (f) training, communications, and outreach; (g) translation; and (h) administrative/secretarial support. The CIU office will be located in Nay Pyi Taw. The CIU will monitor progress against the agreed performance indicators and produce periodic progress reports. A CIU SO, headed by a director, will be formed at project sites in each state, overseeing day-to-day contract management, reporting, coordinating with the local state, CIU, and/or higher level of management.

Component 3: Provision of Eligible Goods

14. Component 3 will be overseen by MOPAF and MOALI, in line with the implementation arrangements outlined by the IDA IRM Operations Manual developed by the GoM and approved by the World Bank and the CERIP dated June 13, 2016, developed for the IDA IRM activation in response to the 2015 floods and landslides. The MOPAF oversees the overall implementation of the IDA IRM in response to the 2015 floods and landslides, regularly updating the National Natural Disaster Management Committee and the RCC. Focal points from the MOALI will oversee the satisfactory implementation of the IDA IRM within their respective departments. Distribution to farm households will be done by the MOALI based on records of disaster impacts and socioeconomic information. The implementation of the IDA IRM will be monitored through the intermediate indicator set out by the Results Framework. The implementation period is 12–18 months. Disbursements will be made based on the approved CERIP following OP/BP 10.00 and are subject to evaluation, examination, and approval by the World Bank, fulfilling all conditions as outlined by the IDA IRM Operations Manual. Withdrawals from the IRM projects' designated accounts (DAs) will only be permitted for payment of expenses incurred, based on the CERIP.

Component 4: Project Management and Knowledge Support

15. Component 4 will be implemented jointly by the MOC and DRD. The Project Secretariat and the CIUs will be supported by the IST to support (a) technical coordination and capacity-building; (b) FM; (c) procurement; (d) social and environmental safeguards compliance; (e) M&E and project audits; (f) training, communications, and outreach; (g) translation; and (h) administrative or secretarial support. As part of knowledge support, studies will be conducted on

strengthening disaster and climate resilience and improving road maintenance and technical capacity building for Government staff at the national and local levels and for local contractors.

Component 5: Contingent Emergency Response

16. For Component 5, following an adverse natural or man-made event that causes a major disaster, and after a Government declaration of a national disaster, the GoM—through the MOPAF—may request the World Bank to reallocate project funds from other components to this component to partially cover emergency response and recovery costs.

Midterm Review

17. A midterm review will be carried out within 20 months after project effectiveness to assess the status of project implementation as measured against the performance indicators. Such a review will include an assessment of the (a) overall implementation progress of the project; (b) results of M&E of various activities and performance indicators; (c) progress on procurement, disbursement, and FM; (d) progress on the implementation of the safeguards instruments and measures; (e) implementation arrangements; and (f) the need for any project restructuring or reallocation of funds among project components to achieve the PDO by the closing date and/or improve performance. At least one month before the Bank's midterm review mission, the project director will provide the Bank with a midterm review report assessing project implementation status, with updated results indicators, project cost estimates, and plans for completion. This report will be reviewed with the World Bank and implementing ministries to help undertake measures required to ensure achievement of the PDO by the closing date and the efficient use of the resources available.

Financial Management

Organization and Staffing

18. **MOC.** An FM capacity assessment of the Finance Department and Finance Section of the Department of Highways of the MOC found that neither has FM experience in managing externally financed projects. The FM risks are rated as Substantial. Current loan projects from external organizations, such as the ADB, Japan, and the Republic of Korea, are being managed by a Finance Unit set up outside of the Finance Section specifically for these projects. The Moreover, FM staff is limited and charged with substantial workloads. The Finance Department is responsible for the internal audit of all MOC operations. To compensate for the lack of experience and the limited staff numbers, a qualified local consultant will be hired as a senior accountant for the duration of the project. For capacity-building purposes, two staff members from the Finance Section of the Department of Highways (DOH) have been assigned to work with the consultant. The full-time local consultant and FM staff will be stationed at the CIU of the MOC and will report to the finance director of the DOH, who has some experience with loan projects. The finance director will oversee the FM aspects of Component 1 and parts of Component 4. State- and region-level offices might assume some FM responsibilities, which will be spelled out in the FM Manual for the project. In addition, if needed, a part-time international FM consultant with extensive experience with the World Bank or other international funding agencies can be hired during the initial period of the project on a competitive basis to support the

CIU and carry out staff training. The residual FM risk is still ranked as Substantial after these mitigation measures are put in place.

19. **DRD.** The head of Finance and finance staff of the DRD have experience in managing the FM of externally financed projects, including projects funded by the World Bank and ADB. The DRD Finance Section will be responsible for the overall FM of Component 2. The DRD finance director has identified a staff member from the Finance Section to work on this project. Given that the staff member does not have experience managing FM of an externally financed project, local consultant support at the level of a senior accountant will be required. Both the consultant and DRD assigned staff will be located at the CIU at the DRD and will report to the finance director, who will oversee the overall FM of the DRD activities under the project. The state, region- and township-level DRD offices might also assume some FM responsibilities, which will be spelled out in the FM Manual for the project. During the initial period, a part-time international FM expert could be recruited within the IST to assist the CIU in setting up the FM system and provide on-the-job training to FM staff.

20. All FM staff involved in the implementation of the project will be made aware of the project's accounting, recording, and reporting requirements through training on the FM Manual, which is to be conducted by the project's finance team. The World Bank will also provide an overview of FM and disbursement requirements when the project becomes effective.

21. FM responsibilities for Component 3 will rest with the MOPAF in accordance with the arrangements for IDA IRM. If and when Component 5 is triggered, FM arrangements in line with the IRM requirements will be updated, outlined and agreed with the GoM. Detailed requirements will also be outlined in the CERIP and related manual updated which will include specific accounting, financial reporting and auditing arrangements.

Budgeting and Planning

22. The current Government budgeting preparation, approval and revision process appears to be rigorous and adequate for project budgeting purposes and therefore the project will follow the existing Government process for submission and approval of budget with some additional steps specific to the project. The budget is to be prepared by each CIU (the MOC for Component 1 and the DRD for Component 2). For Component 3, MOPAF will be responsible for preparing the budget and obtaining parliamentary approval. The budget will provide sufficient details to include costing information of the components based on the implementation and annual work plan. The budget prepared should be reviewed by the finance director and approved by the director general of the responsible department at each implementing ministry. While the DRD will submit the Component 2 budget for Parliament approval separately, the DRD will also submit a copy to the RCC for consolidation and approval through the Project Secretariat supported by the IST. The budgets for all components will also be submitted to the World Bank for review. The budget process will commence and be completed in time to allow its submission to the World Bank, RCC, MOPAF, and ultimately the Parliament. The annual budget will be reviewed semiannually and revised if necessary. The annual budget will be divided into semiannual budgets for easier monitoring and reporting of use of funds against the work plan.

23. For any unspent project budget at the end of the year, the respective project finance team will have to coordinate with the Budget Department of the MOPAF to obtain approval to carry forward the unspent budget to the next fiscal year. There will be no impact on the DA balance as at the end of the fiscal year.

24. The above budgeting process and policies and the supporting documentation needed, including time frame for liquidation, should be documented in detail in the project FM Manual.

Accounting Policies and Procedures

25. Project accounting will follow the cash basis of accounting, with additional systems designed to monitor advances, commitments, and safeguard of assets. Appropriate accounting policies (on receipts, expenditure, foreign exchange, assets, advance, commitment, and so on) and procedures will be determined and detailed in the FM Manual. The project can choose whether to adopt the full International Public Sector Accounting Standards cash basis for project accounting purposes or policies generally accepted for project accounting. Procedures and controls at the Roads Department of the MOC, are in place and controls are quite robust. However, they are not fully documented. Therefore, accounting procedures for various processes and internal controls will be documented in the FM Manual. This will provide guidance to the project finance team and departmental finance staff in carrying out their day-to-day project work. The DRD already has an FM Manual in place and this can be adapted for use under this project.

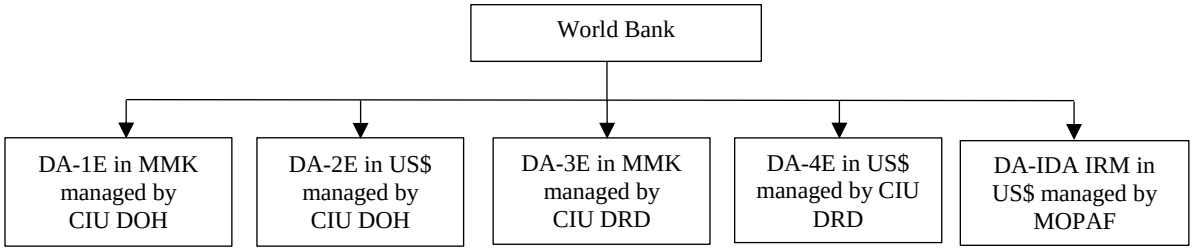
26. The Public Expenditure and Financial Accountability assessment report indicated that manual records are quite accurate. Support is being provided under the recently approved World Bank Public Financial Management project. Therefore, a manual system and/or Microsoft Excel spreadsheet could be used to record spending from the operating account and for the whole project. Format of the financial reports and books to be kept will be specified in the FM section of the FM Manual. Alternatively, appropriate accounting software can be used at the level of the CIU to enable preparation of financial statements and better retention of accounting data on time. The DRD is familiar with the use of accounting software under the current projects they are implementing; hence, it is recommended that the DRD continues to use the software to record and produce report of this component. At the district/township level, a manual system and/or Excel spreadsheet could be used.

Funds Flow and Disbursement

Fund Flows

27. Each CIU will open two DAs, one in Myanmar kyats and another in U.S. dollars to facilitate small payments. Altogether, there will be four DAs. The DAs will be opened at the Myanmar Economic Bank. Funds will flow from the IDA credit account to four DAs. The funds for Component 3 will flow to the DA opened by MOPAF for the IRM activities. The funds flow arrangements are depicted in figure 3.3.

Figure 3.3. The Funds Flow Arrangements[*]



[*] The minimum application size for direct payments will be equivalent to US$50,000.

28. **Financial reporting.** Government reporting is monthly and prepared in accordance with the Myanmar Generally Accepted Accounting Principles. A monthly report is prepared in line with format defined by the MOPAF. This may not be entirely suitable as the project will need to report by project components expenditure category on a six-monthly basis and hence may create a project-specific template. The MOC can choose to automate the production of financial reports by using appropriate software or to prepare the reports manually using an Excel spreadsheet. As for the DRD, it is recommended that the existing accounting software be used to record and produce financial reports. Software will be configured to enable production of financial report in an agreed format. The Unaudited Interim Financial Report (IFR) will be prepared on a semiannual basis. The MOC CIU will prepare IFRs for Component 1 and for the MOC expenditures of Component 4. The DRD CIU will prepare the IFRs for Component 2 and for the DRD expenditures of Component 4. The IFR should, at the minimum, include statement of sources and uses of funds and a variance analysis of actual expenditures against the available budget. The format of the IFR will be agreed between the implementing agencies and the World Bank team. The DRD CIU will also submit semiannual IFRs to the Project Secretariat at the MOC. Each CIU will be required to submit the semiannual IFR to the World Bank no later than 45 days after each semester end. For Component 3, MOPAF will prepare financial reports in a timely manner and in line with the IDA IRM Operations Manual. The financial reports are to be produced half way through the implementation and at the end of implementation.

29. The financial reporting period will follow that of the Government, that is, April 1 to March 31. Reporting procedures and requirements will be elaborated in the project's FM Manual.

Audit Arrangements

30. Annual financial audits will be required. Two separate audits and two audit reports will be required for Component 1 and the parts of Component 4 implemented by the MOC and separately for Component 2 and the parts of Component 4, implemented by the DRD. The Union Office of the Auditor General will be the external auditor of the project. The audit will be carried out with ToR acceptable to the World Bank. The CIU will make arrangements to inform the auditor general of the audit requirements within six months of project effectiveness. Copies of audit reports and management letters will be submitted to the World Bank no later than six months after the end of each fiscal year. The audit report and audited financial statements are required to be publicly disclosed following the World Bank Policy on Access to Information. The mechanism for disclosure will be agreed upon with each implementing agency. For Components 3, the Office of the Auditor General of the Union will in the first six months of the

IDA IRM activation audit the implementation of the CERIP. The Office of the Auditor General of the Union will similarly carry out a final audit at the end of the IRM implementation.

Disbursements Arrangements

31. Four disbursement methods are available to the project: advance, reimbursement, direct payment, and special commitment. Disbursement procedures are/will be documented in the Disbursement Letter issued by the Bank. The primary disbursement methods will be transaction based and will involve advances and direct payments. Reimbursements and special commitments will also be made available. Four DAs, in U.S. dollars and Myanmar kyats, will be opened at the Myanmar Economic Bank. Supporting documentation required for documenting eligible expenditures paid from the DAs are summary sheets with records and statement of expenditures. Direct payments will be documented by records. The frequency of reporting of expenditures paid from the DAs will be on a monthly basis or a period not exceeding a quarter. All the DAs will have variable ceilings based on six-monthly forecasts. The transfer to implementing departments and district offices operating accounts will be considered as advance, with monthly reporting on the use of funds. These accounts will appear as reconciling items on the DA Reconciliation Statement to the extent they have not been accounted for.

32. The minimum application size for reimbursements, special commitments, and direct payments will be equivalent to US$50,000. The project will have a disbursement deadline date (final date on which the World Bank will accept applications for withdrawal from the recipient or documentation on the use of credit proceeds already advanced by the World Bank) of four months after the closing date of the project. This ‘grace period’ is granted to permit orderly project completion and closure of the credit account through the submission of applications and supporting documentation for expenditures incurred on or before the closing date. All documentation for expenditures submitted for disbursements will be retained at the CIUs during the lifetime of the project and be made available to the external auditors for their annual audit and to the World Bank and its representatives if requested. After project closing, the relevant documentation will be retained for two years or following the Government’s regulations on record keeping and archiving. If auditors or the World Bank implementation support missions find that disbursements made were not justified by the supporting documentation, or are ineligible, the World Bank may, at its discretion, require the recipient to (a) refund an equivalent amount to the World Bank or (b) exceptionally, provide substitute documentation evidencing other eligible expenditures.

33. Before the World Bank closes the credit account (two months after the disbursement deadline date), the recipient must provide supporting documentation satisfactory to the World Bank that shows the expenditures paid out of the DAs or refund any undocumented balance. If the recipient fails to provide the documentation or refund required by the World Bank by this date (two months after the disbursement deadline date), the World Bank will not permit the use of the DAs under new credits made to or guaranteed by the recipient.

34. Disbursements from the credit will be made against the following expenditure categories per table 3.2:

Table 3.2. Expenditure Categories

Expenditure Category	Amount of the Credit Allocated (SDR)	Amount of IDA Credit in US$ Equivalent	Percentage of Financed by IDA (inclusive of taxes)
(1) Goods, works, non-consulting services, consultants' services, operating costs and training under Components 1, 4.1(a) and 4.2 of the Project	80,100,000	112,400,000	100
(2) Goods, works, non-consulting services, consultants' services, operating costs and Training under Components 2 and 4.1(b) of the Project	51,800,000	72,600,000	100
(3) Eligible goods and consultants' services under Component 3 of the Project	10,700,000	15,000,000	100% of amounts disbursed
(4) Emergency expenditures under Component 5 of the Project	0	0	100
Total amount	142,600,000	200,000,000	–

35. Under category 3, 100 percent of funds will be disbursed to MOPAF DA opened for IRM activities when this project is effective, to enable MOPAF implement the IRM activities. Disbursement instructions for IRM activities are outlined in the Supplemental Disbursement Letter for the IRM.

36. Retroactive financing is not included under the project.

37. **Disbursement for Component 5.** No withdrawal will be made under Component 5 until the Government has (a) declared that a crisis or emergency has occurred and the World Bank has agreed with such determination; (b) prepared and adopted an emergency response implementation plan for the activities, in accordance with the IRM Operations Manual and in form and substance satisfactory to the Association, setting out the objectives, performance indicators, scope, eligible expenditures, and fiduciary, safeguards and other implementation arrangements for such activities; (c) prepared and disclosed all safeguards instruments required for activities under Component 5 of the project, if any, and the government has implemented any actions which are required to be taken under said instruments; (d) established adequate implementation arrangements, satisfactory to the World Bank, including staff and resources for the activities; and (e) ensured that the provisions of the IRM Operations Manual remain, or have been updated, in accordance with the provisions of Section I.F of this Schedule 2, so as to be appropriate for the inclusion and implementation of activities under Component 5. A CERIP will be developed in accordance with the IRM Operations Manual before the release of any funds under Component 5.

38. Disbursements will be made either against a positive list of critical goods and/or against the procurement of works and consultant services required to support the immediate response and recovery needs of the Government. All expenditures under this component, should it be triggered, will be in accordance with OP/BP 10.00 and will be appraised, reviewed, and found to be acceptable to the World Bank before any disbursement is made. All supporting documents for reimbursement of such expenditures will be verified by the internal auditors of the Government, where applicable, and by the implementing agency, certifying that the expenditures were incurred for the intended purpose and to enable a fast recovery following the crisis or emergency, before the withdrawal application is submitted to the World Bank. This verification would be

sent to the World Bank together with the application. The FM and disbursement action plan (table 3.3) will be included in the POM.

Table 3.3. Financial Management and Disbursement Action Plan

Action	Responsible Party	Timing
Identify two Government staff from the Finance Section of the Roads Department	Finance Section, Roads Department, MOC	By project effectiveness
Recruit two full-time local FM consultants (senior accountant)	Finance Section, Roads Department, MOC Finance Section, DRD, MOALI	Within one month after project effectiveness
If deemed necessary, recruit part-time qualified international FM consultant	Finance Section, Roads Department, MOC	Within one month after project effectiveness
Have in place acceptable financial management manual for the project	Finance Section of Roads Department, MOC, and DRD	By project effectiveness
Agree on Audit ToRs	MOC/DRD/World Bank	By project effectiveness
Agree mechanism for disclosure of project audit reports	MOC/DRD/World Bank	By project effectiveness

Procurement

39. **Procurement arrangements.** Procurable items under the project will include rehabilitation and maintenance of the selected segments of national roads and bridges, and rehabilitation and maintenance of rural roads and bridges; construction equipment; and computers, and technical assistance.

40. MOC will be responsible for procurement of goods, works and services under Component 1 and parts of Component 4. DRD will be responsible for procurement under Component 2 and parts of Component 4 relating to Component 2. MOPAF will be responsible for the procurement under Component 3, which will finance positive list of goods for the 2015 emergency. MOPAF is in the process of hiring the United Nations Office of Project Services to carry out the procurement of these eligible goods. If and when Component 5 is triggered, procurement arrangements in line with the IRM requirements will be updated, outlined, and agreed with the GoM. Detailed requirements will also be outlined in the CERIP.

41. Both the MOC and DRD will establish a CIU at the union level. The procurement of rural roads and bridges will be carried out by the DRD at the union level for the first 18 months, where region-/state-level staff will be trained on the job at the central level, after which procurement will be decentralized to regional offices at five states or regions (that is, Ayeyarwaddy, Bago, Magway, Sagaing, and Yangon). The total proposed priority civil works activities during the first implementation year is US$36 million. The procurement of goods and selection of consultant services will be carried out by the DRD CIU union level. The MOC has assigned the chief engineer of Chin State, who is based in Nay Pyi Taw, to be the project director of the CIU, which will handle the fiduciary of Component 1 of the proposed project. Each will establish a CIU staffed with at least one person with sound knowledge of World Bank Procurement Guidelines and Procedures.

42. **World Bank Procurement and Consultant Guidelines,[24] dated January 2011 and revised in July 2014, will apply.** The World Bank has streamlined the procurement process for new and ongoing projects in Myanmar, with effect from February 2016. These streamlined procedures consider the country situation and capacity and are in line with the World Bank Guidance Note on Projects in Situation of Urgent Need of Assistance or Capacity Constraints, dated April 2013. These new procedures offer simplified procurement arrangements, higher thresholds for shopping and use of Selection based on the Consultants' Qualifications as well as selective use of tender securities. In addition to the above, provisions of the IRM Manual agreed between the World Bank and the GoM will be applied for Components 3 and 5. Bank Standard Bidding documents and Requests for Proposals will be used for all ICB packages and consultancy packages requiring international competition. Customized shopping templates with detailed contract formats, which are in use in World Bank-financed Projects in Myanmar as part of the streamlined procedures, will be used.

43. The Government has declared an emergency in relation to the July 2015 floods and landslide emergency and has requested IDA assistance. Funds under Component 3 will finance an agreed positive list of goods to respond to this emergency in the agriculture sector. The Government is in the process of hiring United Nations Office for Project Services to carry out the procurement of goods under this emergency response. In the event that negotiations with the United Nations Office of Project Services are not successful, the project management unit of the ongoing Agricultural Development Support Project, implemented by MOALI and financed by the World Bank, will procure the goods required for the IRM. For Component 5, the Government will establish procurement arrangements in line with the IDA IRM Manual and they will be further detailed in the CERIP.

44. **Procurement capacity and risk assessment and mitigation measures.** The project's procurement risk is high. An assessment of implementing entities was conducted. Based on the assessment, the procurement risks and risk mitigation measures were identified (table 3.4). The residual risk rating after these measures are put it place is still high. This action plan will be included in the POM.

Table 3.4. Action Plan: Key Procurement Risks and Mitigation Measures

Issue/Risk	Proposed/Agreed Mitigation Measure	Time Frame for Implementation	Responsible by
Lack of legal framework of public procurement: There is no national level legislation on public procurement. There are two directives, one from 2013 for general procedures and another from January 2014 for procurement of civil works, but both are still in draft version. In project implementation, there may be	The World Bank Procurement/ Consulting Guidelines will apply. The World Bank will provide orientation to project implementation units before the start of the project. Customized shopping templates and contracts will be used	During implementation	MOC and DRD

[24] Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers, dated January 2011 and revised July 2014, and the Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011 and revised July 2014.

Issue/Risk	Proposed/Agreed Mitigation Measure	Time Frame for Implementation	Responsible by
confusion regarding the procedures and rules to be followed.			
Lengthy approval process of procurement	Major milestones for each contract will be identified in the Procurement Plan.	Before effectiveness	MOC and DRD
	Procurement approval process in the MOC and DRD to be prepared in diagrammatic form with the agreed timelines and included in the Project Operational Manual,	Before effectiveness	MOC and DRD
	Responsibilities for preparing the ToR, technical specifications, or designs to be clearly specified	Before effectiveness	MOC and DRD
	The World Bank team will provide training to all senior officials and staff involved in approval process.	During implementation	World Bank
Ministries tender practices may have an impact on transparency. These include price negotiations, use of two-envelope system, and scoring system for works and preferential treatment for brand names.	The use of these practices will not be permitted under the project. These practices will be included as exceptions in the Financing Agreement	During implementation	MOC and DRD
Limited capacity in World Bank procurement at union level and many projects being implemented by units at the union level (the DRD and MOC). No experience with international procurement state/region level	An international procurement consultant will be employed to assist the MOC and DRD and to provide knowledge transfer and capacity building to the assigned MOC and DRD staff.	During implementation	MOC and DRD
	The MOC and DRD to assign at least one full-time officer to work with the international procurement consultant.	During implementation	MOC and DRD
	The Bank team will provide procurement training to the implementing agencies' staff to familiarize them with the Bank's procurement policy and procedures.	During implementation	World Bank
	Apply streamlined procurement procedures allowing for higher use of shopping and selection using consultant selection method	During implementation	Bank, MOC and DRD

45. **Procurement Plan.** The MOC and DRD have prepared the Procurement Plan, dated June 13, 2016 for the first 18 months of implementation. These plans have been discussed and agreed with the World Bank.

46. **Prior review threshold for procurement.** Procurement decisions subject to prior review by the World Bank are as stated in Appendix 1 to the Procurement Guidelines.

Table 3.5. Procurement Thresholds

	Procurement Method	Method Threshold US$	Prior Review Threshold US$
1.	International Competitive Bidding and Limited International Bidding (goods)	Above 500,000	All
2.	Shopping (goods)	Below 500,000	Above 200,000
3.	International Competitive Bidding (works)	Above 1,000,000	All
4.	Shopping (works)	Below 1,000,000	Above 200,000
5.	Direct Contracting	–	Above 5,000
6.	Procurement from United Nations agencies	–	Above 10,000

47. **Prior review threshold for selection of consultants.** Selection decisions subject to prior review by the Bank are as stated in Appendix 1 to the Guidelines Selection and Employment of Consultants.

Table 3.6. Selection Methods and Threshold Levels

	Selection Method	Prior Review Threshold US$	Method Threshold US$
1.	Quality- and Cost-Based Selection and Quality-Based Selection,	100,000	Above 500,000
2.	Selection based on the Consultants' Qualification, Least-Cost Selection	100,000	Below 500,000
3.	Individual Consultant	Single-Source Selection contract above 10,000 and all fiduciary and legal positions	–
4.	Single Source (Firms)	Above 10,000 and all fiduciary and legal positions	–

48. A summary of the goods and works procurement packages planned during the project period is included in table below.

Table 3.7. Summary of the planned goods and works packages

	Description	Estimated Cost US$	Packages	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Comments
1.	Summary of the International Competitive Bidding (Goods) packages	3,282,500	2	No	Prior	
2.	Summary of the other (Goods) packages	1,035,000	6	No	Prior/Post	
3.	Summary of the International Competitive Bidding (Works) packages	15,369,000	4	No	Prior	
4.	Summary of the others (Works) packages	-	-	No	Post except 1st shopping contract	

49. A summary of consultancy assignments planned during the project period is included in the table below.

Table 3.8. Summary of the planned consultancy assignments

	Description of Assignment	Estimated Cost	Packages	Review by Bank (Prior / Post)	Comments
1.	Summary of number of contracts that will be let under Quality- and Cost-Based Selection	5,500,000	2	Prior	
2.	Summary of number of contracts that will be let under Consultants' Qualification Selection	550,000	3	Prior/Post	
3.	Summary of number of contracts that will be let under Individual Consultant	4,754,000	22	Prior/Post	

50. **Frequency of procurement support.** Based on the finding of the procurement capacity and risk assessment, the need and frequency of implementation support missions to assist in the project implementation will be determined. The frequency and sampling size for procurement post reviews will also depend on the capacity and risk assessment and will be recommended after the assessment findings.

Safeguards

Social Safeguards

51. The project will generate positive benefits to disaster-affected people, including the poor, women, ethnic minorities, and other vulnerable social groups in the form of improved access to critical infrastructure and services, as well as direct income support. Specific investments to be supported under the project will be identified during implementation; however, no significant negative social impact is expected to occur. The project will support rehabilitation activities of small scale in the same locations where the previous infrastructure was located. Since the project will use build-back-better approaches for affected roads and bridges, there is a possibility that some subprojects, including the rehabilitation of the Kale-Hakha Corridor, may entail minor realignments and cause minor loss of private land or assets. It is expected that ethnic minority communities are present in project areas.

52. The World Bank's OP 4.12 and OP 4.10 are triggered. An RPF and an EMPF were prepared by the GoM and attached to the ESMF. The RPF provides principles and procedures to identify, assess, minimize, and restore loss of private land and other assets—including screening criteria, eligibility criteria, entitlement matrix, and valuation methodology—and organizational arrangements and design criteria to be applied to subprojects to be prepared during the project implementation. The EMPF describes processes and procedures to carry out free, prior, and informed consultations with affected ethnic minority communities leading to their broad community support to the project and identify negative impacts that may result from the project and opportunities to enhance project benefits, as well as institutional,, monitoring, and disclosure arrangements. If the project finances any preparatory works that the GoM has already started, due diligence will be conducted of such preceding works and any gaps found will be addressed under the Ethnic Minority Plan and/or RAP or abbreviated RAP for project sections or through the stand-alone Corrective Action Plan. There is a risk that vulnerable social groups, who are not covered by the EMPF, face difficulties receiving project benefits in a fair and

equitable manner. The ESMF includes provisions to ensure that such social groups receive project benefits in a fair and equitable manner.

Gender

53. **Analysis.** Myanmar has a population of 51.4 million. Females constitute 51.78 percent of the population.[25] Women present 51 percent of the households that are dependent on agriculture. The PDNA found that overall, women are more negatively affected by the 2015 floods and landslides than men. The loss of food stocks and livestock, inundation of farmland and subsequent loss of agricultural labor, and the inability to look for alternative livelihoods because of the high burden of care work means that they are under considerable burden to provide food and nutrition for their families, while they have far fewer resources and options for alternative livelihoods when compared to men. The PDNA highlights impacts on women's lives across different areas, including health, nutrition, livelihoods assets loss, financial burden, and increase of sexual violence, including in displaced camps or shelters. Pertaining to the transport sector, the disaster has destroyed roads and bridges, disrupting women's accessibility to markets, health centers, schools, care, and income-earning productive activities.

54. Based on the recommendations made by the PDNA but also good practice from labor-based maintenance programs in Vietnam and China, reconstruction of transport infrastructure should consider the safety and welfare of local communities, especially for women and vulnerable groups such as the elderly, disabled, and children. For any reconstruction works, the implementing agencies should consider the following:

- Implementing agencies should receive training on addressing gender concerns and interests. If relevant, a gender focal point for the project should support the implementing agencies.

- Organizing consultations with local communities is important to understand their needs and concerns. Consultations should allow for separate consultations with men and women.

- Wherever relevant, physical road safety features (such as signage, footpaths, pedestrian crossings, lighting, and speed bumps) should be incorporated along the reconstructed roads, as well as features to enable safe access from communities to these roads.

- Implementing agencies should provide training on road safety to project-affected communities, including men, women, and children.

- All contracts for construction firms and contractors should make provisions for training on issues such as HIV and prevention of sexual harassment, abuse and violence, and child labor and regularly monitor and report on the adherence to guidance set out by the Operations Manual and safeguards documents. Private

[25] *Myanmar Census 2014*. Department of Population, Ministry of Immigration and Population. May 2015.

contractors should be encouraged to hire labor from local communities and ensure that equal pay for equal work is provided.

- Training and employment processes that offer women the same opportunity as men to receive information about training and hiring should be ensured and equal pay for equal work should be provided.

- Core leaders and members of the village rural roads maintenance teams or road maintenance committees must include a significant number of women, at least 30 percent.

- Training of area coordinators and community facilitators will include gender training and facilitating the active participation of women and marginalized groups in social mobilization, project planning, implementation, and evaluation.

- Communities should have access to information, with easy and appropriate modes of communication ensuring that both men and women receive information.

55. **Actions.** The safeguards instruments, POM, technical designs, and training for staff and contractors will include specific actions to mitigate specific risks and concerns and use opportunities for ensuring the well-being and equal opportunities of men and women to benefit from the project investments. For both Component 1 and Component 2, gender considerations will be considered, particularly related to road access, service provision, road safety, sexual health and safety, child labor, contracting, and equal pay opportunities. Under Component 2, consultations, training, and targeting can enhance participation of women and ability to benefit from the labor-intensive programs. Sustainable maintenance is expected to generate employment opportunities for women living in communities along roads and bridges under rehabilitation. Under Component 3, distribution of goods and provision of training to farm households should provide equal opportunities for benefitting from the items to women and men. Across the components, men and women will have access to information and capacity building.

56. **Monitoring.** The project Results Framework includes an indicator on direct beneficiaries, disaggregated by gender, as well as PDO level, on the number of workdays generated, of which the percentage generated by women. The grievance system will monitor grievance claims made by both men and women. Gender issues will be monitored throughout the project implementation.

Environment

57. Significant, irreversible and unprecedented environmental impacts are not anticipated and mitigation measures for project-supported activities are expected to be readily available. Therefore, this project is classified as Category B as per the World Bank Safeguard Policies. The project will not finance new infrastructure or any other measure beyond recovery or build-back-better works. Most of the expected project environmental impacts will relate to the rehabilitation works on mountainous and rural roads. The reconstruction works will generally be implemented in the existing roads' right-of-way and only in certain areas, should the works entail minor realignments (maximum of a few kilometers) and strategic widening of the road to two lanes.

Category A subprojects[26] will be excluded from project financing due to the scope of the expected rehabilitation works and the restrictions in timing typical of an emergency operation. Reconstruction and rehabilitation activities under the project may have negative impacts on natural habitats. The proposed project could involve clearing of trees, for example, for road widening and minor realignments along transportation corridors and feeder roads, as well as in the sourcing of construction materials. The project could also involve reforestation as a slope stabilization measure. Because minor environmental impacts, temporary impacts to cultural resources, and minor loss of private land or assets may occur as a result of road reconstruction and rehabilitation and given the presence of ethnic minorities in project-affected areas, the project triggers the World Bank's OP 4.01, OP 4.04, OP 4.36, OP 4.11, OP 4.12, and OP 4.10. It is not expected that the roads rehabilitated will pass through protected areas or national parks.

58. **OP/BP 4.01 - Environmental Assessment.** The rehabilitation and maintenance of national and rural roads and bridges could cause environmental impacts which are mainly expected to be site specific. Few, if any of them, are irreversible and in most cases, mitigation measures are readily available. The construction of road infrastructure could put pressure on the existing local resources, due to increased access to markets and for extraction of construction materials (brick, gravel, sand, wood, and so on). Materials for road construction are generally sourced locally. This entails a risk of illegally sourced wood which will be addressed by the safeguards screening and supervision. Local extraction of construction material (for example, sand, gravel, clay and wood) could also increase vulnerability to landslides and soil erosion. Guidance on quarries management are included in the ESMF. Small-scale construction works have risks related to community and workers health and safety and can cause temporary air and water pollution due to the handling of construction material. Rehabilitation and maintenance works of national roads and rural roads and bridges could entail risks related to community and workers health and safety and can cause temporary air and water flow disruption/pollution. The ESMF includes measures to assess and manage the environmental and social impacts of road rehabilitation and maintenance works. Occupational and community health and safety risks related to rural road construction, workers camps and road safety are an issue in Myanmar.

59. **OP/BP 4.04 - Natural Habitats.** The project activities may also have negative impacts on natural habitats. Specifically, rehabilitation and maintenance works may affect nearby habitats. The ESMF includes measures to screen and manage the project impact on natural habitats.

60. **OP/BP 4.36 - Forests.** The Proposed project could involve clearing of trees, for example for road widening and minor realignments along transportation corridors and feeder roads, as well as in the sourcing of construction materials. The project could also involve reforestation as slope stabilization measure. The ESMF includes measures to screen and manage the project impact on forestry, including possible compensation opportunities.

[26] According to World Bank classification, Category A projects are those that will likely produce impacts that are irreversible, sensitive, diverse, unprecedented, and on a scale beyond the project area.

61. **OP/BP 4.11 - Physical Cultural Resources.** Cultural sites could be located in the vicinity of the project-supported subprojects (for example, burial sites, shrines) and could be temporarily affected by them. Chance-find procedures are included in the ESMF.

62. Given that specific subprojects and location are not known at the time of appraisal, the GoM prepared an ESMF, which provides general policies, guidelines, and procedures to ensure that the project is implemented in an environmentally and socially sustainable manner and in line with the applicable World Bank safeguard policies and applicable Government regulation. The CIUs' environmental and social safeguard staff will be responsible for screening each subproject, confirming categorization of the project as B, and proposing the type of safeguards instruments required. The type of expected environmental instruments include Environmental and Social Impacts Assessment, Environmental and Social Management Plan, and ECOP. After disclosure of draft safeguards documents in English and the Myanmar language on the MOC and DRD websites on March 16 and April 1, 2016, the GoM carried out three rounds of public consultations on the draft ESMF in Yangon, Chin State, and Bago Region in April and May 2016. Results of these consultation are included in the revised ESMF, which was disclosed to the public on June 1, 2016 in English, and on June 2, 2016 in the Myanmar language.

63. The project will support analytical work (for example, landslide risk assessments, feasibility studies, environmental and social instruments) to support the design and location of the investments and minimize environmental impacts. The project will support build-back-better approaches for the affected infrastructure which are expected to contribute positively by promoting the integration of resilient and innovative ideas/technologies for road infrastructure, on a case-by-case basis, for example, reuse of salvaged material, safer location, flood-resistant structures, and so on.

64. For Component 3, the approved list of goods and operating costs are expected to have minimal or no adverse environmental impact. However, recognizing that there could be potential negative impacts attributed to the goods bought under the project—especially disposable goods with inert chemical qualities; disposable goods with physical, chemical, or biological hazards; and durable goods in use for years and decades—the World Bank requires the production and implementation of the ECOP to provide guidance and minimum standards to minimize and manage and risks to environment or human health and safety. The ECOP is included in the project's ESMF, as well as in the IDA IRM CERIP.

65. Safeguards preparation and implementation will be carried out by each CIU, under the MOC for Component 1 and the DRD for Component 2. Each CIU will have a designated safeguard team with adequate staff and capacity to carry out safeguards duties, including screening and scoping of subprojects and preparation of environmental and social safeguards instruments. The CIU will employ qualified environmental and social safeguards specialists as well as consultants to assist them in their safeguard implementation duties. Additionally, it is envisaged that the CIUs will be supported by an international safeguards adviser, under the IST, on a semiannual basis, which will guide the CIUs safeguard teams in the screening, scoping, contracting, supervising, and monitoring safeguard implementation and well as assessing CIU's capacity and designing a capacity-building program to enable adequate safeguard implementation.

66. For Component 3, the project management unit, including locally recruited environmental and social safeguards specialists of the ongoing Agricultural Development Support Project, implemented by the MOALI and financed by the World Bank, will oversee and support the implementation of the IDA IRM in line with the ECOP.

67. For Component 5, for future IDA IRM activation in case of an eligible crisis or emergency, an ESMF will be prepared and included in the IDA IRM Operations Manual.

Annex 4: Implementation Support Plan

Myanmar: Flood and Landslide Emergency Recovery Project

Implementation Support Strategy and Approach

1. The Implementation Support Plan has been developed considering (a) the emergency nature of the project; (b) project focus on resilient recovery of a critical sector and addressing urgent livelihoods needs of the people of Myanmar; (c) lessons learned from similar operations; (d) planned implementation schedule; and (e) risks and needs as summarized in the Systematic Operations Risk-Rating Tool (SORT).

2. This plan envisions frequent implementation support missions by a multisectoral team, particularly in the first 12 to 18 months of implementation paying particular attention to the following aspects: (a) technical, including quality checks in the field; (b) fiduciary; (c) safeguards; and (d) project implementation pace, expenditure efficiency, and overall progress. The World Bank team will monitor implementation progress through (a) key performance indicators as outlined in the Results Framework (annex 1); (b) project reports; (c) regular communication with the client entities; (d) fiduciary oversight; and (e) verification of progress through field visits.

Implementation Support Plan

3. The following sections provide preliminary estimates of the skill, timing, and resource requirements over the implementation period of the project. The plan will be reviewed periodically to ensure that it continues to meet the implementation support needs of the project.

4. Implementation will be supported by a task team based in the East Asia and the Pacific region to ensure a timely, flexible, and more effective response to the client's needs. Additional technical specialists will be engaged as needed to ensure quality of project management and implementation and drawing upon global experiences.

5. Specialists will provide regular implementation support and technical assistance to the counterpart teams during project implementation. They will identify capacity-building needs to strengthen procurement, FM, and safeguards capacity of the project implementation units.

6. **Procurement.** In addition to the procurement prior review to be carried out by the task team, procurement support missions will be undertaken every six months to carry out post review of procurement actions in the field. The procurement specialist will provide focused procurement support, including (a) reviewing procurement documents and providing timely feedback to the counterparts; (b) providing detailed advice and guidance on the application of the World Bank's Procurement Guidelines; (c) monitoring procurement progress against the Procurement Plan; and (d) supporting training activities as needed.

7. **FM.** The World Bank will conduct risk-based FM supervisions, at appropriate intervals, in the following ways: (a) review the project's quarterly financial reports, the project's annual audited financial statements, the auditor's management letter, and remedial actions, if any and (b) during the Bank's on-site supervision missions, review the following key areas: (i) project

accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) disbursement management and financial flows, including counterpart funds, as applicable; and (iv) any incidences of corrupt practices involving project resources.

8. **Environment and social safeguards.** During the period of the design and implementation of civil works, the environmental and social safeguards specialists will make annual or more frequent mission visits to ensure compliance with project safeguard requirements. Between missions, they will review the supervision consultant's reports to monitor progress and identify issues that may arise. The safeguards specialists will monitor the implementation in accordance with the World Bank safeguard policies and advise on corrective measures as needed. The implementation of safeguards instruments will be closely monitored, both through reviewing the supervision consultant's reports and through field visits.

9. **Technical supervision.** Technical specialists will make annual or more frequent mission visits to ensure quality of construction/implementation of livelihoods support programs. Between missions they will review ToRs, designs, and reports and identify issues that may arise and advise on corrective measures as needed to ensure quality of construction and program implementation of the labor-intensive approaches.

Table 4.1. Focus of Implementation

Time	Focus	Skills Needed	Resource Estimate per Year	Partner Role
Years 1–2	• Supervision of phase 1 investments • Technical and procurement review of bidding documents • Procurement training • Safeguards training	• Technical • Bank procurement • Fiduciary • Bank safeguards • Project management and monitoring	Supervision budget estimated - US$250,000	n.a.
Years 2–5	• Supervision and management of construction contracts • Environmental and social monitoring • Fiduciary	• Technical/construction experts • Bank procurement • FM • M&E • Social • Environmental	Supervision budget estimated - US$250,000	n.a.
Closing	• Drawing lessons learned and mainstreaming good practices	• M&E • Technical	Supervision budget estimated - US$20,000	n.a.

Note: n.a. = Not Applicable.

Table 4.2. Skills and Resource Requirements

Time	Focus	Resource	Time (Staff Weeks)
0–6 months	Team leadership	TTL/Co-TTL	12
	Project implementation support	Operation officer/analyst	6
		ACS	4
	Technical and procurement review of bidding documents, training	Road and bridges engineers	6
		Procurement specialist	3

Time	Focus	Resource	Time (Staff Weeks)
	Labor-intensive contracts	Technical specialists	6
		Procurement specialist	2
	Environmental and Social Safeguards training, review and supervision	Environmental safeguards specialist	3
		Social safeguards specialist	3
	FM training and supervision	FM specialist	1
6–48 months	Team leadership	TTL/Co-TTL based in the region	40
	Project implementation support	Operation officer/analyst	20
		ACS	10
	Project construction, technical and procurement review of bidding documents, training	Road and bridges engineers	10
		Procurement specialist	4
	Technical review of outputs	Technical specialists	10
	Environmental and Social Safeguards training, review and supervision	Environmental safeguards specialist	8
		Social safeguards specialist	8
	Procurement training and Implementation support	Procurement specialist	16
	FM training and supervision	FM specialist	5

Note: ACS = Administrative and Client Support; TTL = Task Team Leader.

Annex 5: Economic and Financial Analysis

Myanmar: Flood and Landslide Emergency Recovery Project

Introduction

1. The investment activities of the project aim to resolve the emergency situation in the floods- and landslides-affected areas with immediate benefits for affected households and communities as well as medium- and long-term economic impact from climate-resilient infrastructure. This section aims to evaluate the economic impacts from the two key project components: Component 1: Resilient Rehabilitation of National Roads, and Component 2: Resilient Rehabilitation of Rural Roads and Livelihoods Support.

2. The economic evaluation was performed based on the work plan for the national road rehabilitation plans in Chin State (192 km), Rakhine State, and Ayeyarwady Region (80 km) and the rural road rehabilitation plan.

3. The cost-benefit analysis was conducted to calculate the EIRR and the NPV of the project. The major economic benefits of the project considered are the direct income impact from the project's activities and travel time saving benefits to passengers. To be conservative, and due to lack of data, the vehicle operating cost saving and generated, or diverted, traffic were not considered in the economic analysis.

Key Assumptions

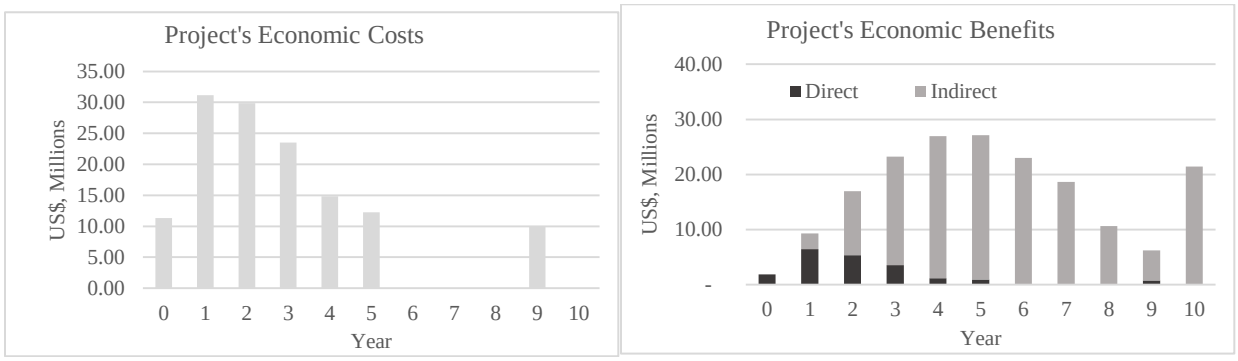
4. **SCF and cost.** To estimate the economic costs of the project, the SCF is derived based on five percent commercial taxes, two percent natural resources taxes, estimated contractor's overhead of 10 percent for national roads (eight percent for rural roads), and 20 percent import duties, with 25 percent assumed import content (for national roads only). Therefore, the SCFs are estimated to be 0.828 and 0.879 for national and rural roads, respectively. The civil works are assumed to be implemented during the first five years, with additional national maintenance of US$10 million in year 9.

5. **Direct benefits and beneficiaries.** The calculation of direct income impact to the project's beneficiaries is based on the following assumptions. The average share of wage costs is 10 percent for national roads and 35 percent for rural roads. The targeting performance, which is the proportion of wages that go to beneficiaries in the bottom 40 percent of the population, is assumed to be 78 percent for national roads and 80 percent for rural roads. The number of beneficiaries for national road rehabilitation in Chin State is estimated at 150,000 beneficiaries; 275,000 beneficiaries for Rakhine and Ayeyarwady; and 679,500 beneficiaries for rural roads.

6. **Indirect benefits.** Without reliable traffic data, the analysis estimates traffic volume based on the number of beneficiaries (that is, one-way trip traffic based on 50 percent of beneficiaries for national roads and 35 percent for round-trips on rural roads). The traffic growths are assumed to be three percent for national roads and one percent for rural roads. The trip length is also assumed to be 50 percent of the route's length for national roads. The indirect benefits, then, are calculated based on time saved as well as on the estimated time value of MMK

3,600 per day—the minimum wage. The stream of economic costs and direct and indirect benefits are illustrated in table 5.1.

Figure 5.1. Project Economic Costs and Benefits



Source: World Bank team calculation.

Results of Economic Analysis

7. The economic analysis covers a period of 10 years (2017–2026). The EIRR is calculated to be 15.40 percent and NPV US$24.12 million with six percent discount rate according to the World Bank's Technical Note on Discount Rate of January 2016. The sensitivity analysis on various assumptions is illustrated in table 5.2. Because there is no revenue in road rehabilitation and maintenance, the finances of the project are reflected in the cost structure and the financial analysis is not needed.

Table 5.1. Results of Economic Analysis

	EIRR (%)	**NPV (million US$)**
Base case	15.40	24.12
All traffic growth is 0%	11.93	13.89
Average trip distance reduced by 20%	6.04	0.11
Investment cost increased by 30%	4.43	−5.01
Discount rate at 12%	15.40	6.76

Annex 6: Map of Myanmar

Myanmar: Flood and Landslide Emergency Recovery Project