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Report No: PAD1698

#### INTERNATIONAL DEVELOPMENT ASSOCIATION

#### PROJECT PAPER

#### ON A

#### PROPOSED RESTRUCTURING AND ADDITIONAL CREDIT

#### IN THE AMOUNT OF SDR 30.5 MILLION (US\$ 42 MILLION EQUIVALENT)

#### TO THE

#### DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

#### FOR A

#### CLIMATE RESILIENCE IMPROVEMEMENT PROJECT

**FEBRUARY 26, 2016** 

Social, Urban, Rural and Resilience Global Practice South Asia Region

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## CURRENCY EQUIVALENTS

# (Exchange Rate Effective February 2016)

Currency Unit = Sri Lankan Rupee (Rs) Rs 144 = US\$1 US\$ 1.3805 = SDR 1

#### FISCAL YEAR

January 1 – December 31

# ABBREVIATIONS AND ACRONYMS

AF	Additional Financing	IRR	Internal Rate of Return
BOQs	Bill of Quantities	IUFR	Interim Unaudited Financial Report
CERC	Contingent Emergency Response	LIDAR	Light Detection and Ranging
	Component		
CPS	Country Partnership Strategy	MASL	Mahaweli Authority of Sri Lanka
CRIP	Climate resilience Improvement	MIWRM	Ministry of Irrigation and Water
	Project		Resources Management
DA	Designated Account	NBRO	National Building Research
			Organization
DPD	Deputy Project Director	NPD	National Planning Department
DRM	Disaster Risk Management	OP/BP	<b>Operational Policy/ Bank Policy</b>
DSWRPP	Dam Safety and Water Resources	PDO	Project Development Objective
	Planning Project		
EA	Environmental Assessment	PIU	Project Implementing Unit
EMF	Environmental Management	PMU	Project Management Unit
	Framework		
EMP	Environmental Management Plans	RDA	Road Development Authority
GoSL	Government of Sri Lanka	RDD	Road Development Department
GRM	Grievance Redress Mechanism	RF	Results Framework
GRS	Grievance Redress	SMF	Social Management Framework
IA	Implementing Agency	SORT	Systematic Operations Risk Rating
			Tool
ICB	International Competitive Bidding	TOR	Terms of Reference
ID	Irrigation Department	UPC	Uva Provincial Council
IOC	Incremental Operating Cost	WB	World Bank
IDA	International Development		
	Association		

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# SRI LANKA

# **Climate Resilience Improvement Project – Restructuring and Additional Financing**

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# Project Paper Data Sheet

# Project Paper

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# ADDITIONAL FINANCING DATA SHEET

# Sri Lanka

# Climate Resilience Improvement Project - Additional Financing (P157392)

#### SOUTH ASIA

#### GSU18

	<b>Basic Information – Parent</b>											
Parent Pr	oject ID:	P146	314			Original	EA Categ	ory:	B·	- Partial	Asses	sment
Current Closing Date: May 30, 2019												
		n – A	dditional	Financing	g (AF)	_						
Project ID: P157392			Addition (from A	Additional Financing Type (from AUS):				Scaling up				
Regional	Vice Presider	nt: Anne	ette Dixon			Propose	d EA Categ	gory:	B -	– Partia	l Asses	sment
Country ]	Director:	Franc	coise Clottes	8		Expecte Date:	d Effective	ness	Ap	oril 29, 2	2016	
Senior Gi Director:	lobal Practice	Ede J	Ede Jorge Ijjasz-Vasquez			Expecte	d Closing I	Date:	May 30, 2019			
Practice Manager/	/Manager:	Berni Broni	Bernice K. Van Bronkhorst Rep			Report I	Report No:			PAD1698		
Team Lea	ader(s):	Surar Marc	nga Kahand Forni	awa,								
		·			Bor	rower						
Organiza	tion Name	Contact			T	itle	e Telephone		E	mail		
Ministry	of Finance	Dr. R. H.	. S. Samarat	hunga	a So	ecretary 94112484500			sf@mo.treasury.gov.lk			
Projec	t Financing I	Data–Parei	nt - Climate	e Resi	ilienc mi	ce Improv llion)	vement Pro	oject (C	RIP	) - (P14	46314 )	) (in US\$
Key Date	es											
Project	Ln/Cr/TF	Status	Approval D	Date Signi		ing Date	Effectiver Date	ness Or Clo	Driginal Closing Date		Revise Date	ed Closing
P146314	IDA-54170	Effective	22-Apr-2014	1	10-Ju	ul-2014 05-Aug-2014		14 30-	30-May-2019		30-Ma	y-2019
Disburser	ments	1	1			1		1		1		1
Project	Ln/Cr/TF	Status	Currency	Orig	inal	Revised	Cancelled	Disburs	sed	Undist	oursed	% Disbursed
P146314	IDA-54170	Effective	XDR	71.7	0	71.70	0.00	12.66		59.04		17.66

Project Financing Data– Additional Financing - Climate Resilience Improvement Project (CRIP) - Additional Financing (P157382)								
[] Loan []	Grant []	IDA Grant	,					
[X] Credit [ ]	Guarantee [ ]	Other						
Total Project Cost:	US\$ 42.00 millio	on Total Bank	Financing:	US\$ 4	42.00 million			
Financing Gap:	0.00							
Financing Source – A	dditional Financing	g (AF)		A	Amount (US\$ Million)			
BORROWER/RECIPIEN	Т				0.00			
International Development	nt Association (IDA)				42.00			
Financing Gap					0.00			
Total					42.00			
Policy Waivers								
Does the project depart fr	om the CPS in conte	nt or in other significat	nt respects?	No				
Does the project require a	any policy waiver(s)	)		No				
		<b>Team Composition</b>						
Bank Staff	-	-	-					
Name	Role	Title	Specializatio	on	Unit			
Suranga Kahandawa	Task Team Leader (ADM Responsible)	Disaster Risk Management Specialist	Disaster Risk Management	<b>K</b> t	GPSURR			
Marc Forni	Co - Team Leader	Senior Disaster Risk Management Specialist	Disaster Risl Management	<b>K</b> t	GPSURR			
Sunethra Chandrika Samarakoon	Procurement Specialist	Procurement Specialist	Procurement		GGODR			
Enoka Wijegunawardene	Financial Management Specialist	Senior Financial Management Specialist	Financial Management	t	GGODR			
Mokshana Wijeyeratne	Environmental Specialist	Environmental Specialist	Environment	t	GENDR			
Susrutha Goonesekera	Safeguards Specialist	Social Development Specialist	Social Safeg	uards	GPSURR			
Amali Rajapaksa	Team Member	Senior Infrastructure Specialist	Transport Connectivity	,	GTIDR			
Tafadzwa Irvine Dube	Team Member	Operations Analyst	Disaster Risk Management	K t	GFDRR			
Ulrich K. H. M. Schmitt	Team Member	Program Leader	Country Con	text	SACSL			
Samanmalee Kumari Sirimanne	Team Assistant	ACS Staff	Facilitation		SACSL			

Hisham Abdo	Kahin	Lawyer		Lead Counsel					LEGES
Extended Tea	nm								
Name						I	Location		
Henk Ogink		C F	Consu Engine	ltant - Senior Hydro eer	ologi	cal l	Netherland	s	
Marinos Skem	ipas	C F	Consu Engine	ltant - Senior Geote eer	chni	cal C	Greece		
Nihal Fernand	0	C E	Consu Engine	ltant – Senior Irriga eer	tion	0	Colombo		
P.P. Ghnanapa	ıla	C E	Consu Engine	ltant – Senior Drain eer	age	(	Colombo		
Locations		•							
Country	First A Division	dministrative n	Lo	ocation	P	lanned	Actual	Co	mments
Sri Lanka	Norther	n Province	М	annar			X		
Sri Lanka	Eastern	Eastern Province		rincomalee			X		
Sri Lanka			Ba	atticaloa		X			
Sri Lanka				mpara			X		
Sri Lanka	North C	North Central Province		olonnaruwa			X		
Sri Lanka				nuradhapura			X		
Sri Lanka	North V	Vestern	Pu	ıttalam			X		
	Provinc	e	Kı	urunegala			X		
Sri Lanka	Uva Pro	ovince	Μ	onaragala			X		
			Ba	adulla		Х			
Sri Lanka	Central	Province	Ka	andy			X		
			Nı	uwara Eliya			X		
			Μ	atale			X		
Sri Lanka	Souther	n Province	Ha	ambantota					
			•	Institutional Da	ta				
Parent (Impr	oving Clin	nate Resilienc	e - P1	146314)					
Practice Area	(Lead)								
Social, Urban,	Rural and	Resilience							
Contributing	Practice A	reas							
Water, Agricul	lture, Trans	sport							

# **Cross Cutting Topics**

[X] Climate Change

- [ ] Fragile, Conflict & Violence
- [] Gender
- [] Jobs
- [ ] Public Private Partnership

#### Sectors / Climate Change

#### Sector (Maximum 5 and total % must equal 100)

	1 /						
Major Sector	Sector	%	Adaptation Co-benefits	s %	Mitigation Co-benefits %		
Water, sanitation and flood protection	Flood protection	35	100				
Public Administration, Law, and Justice	General public administration sector	25	100				
Transportation	Rural and Inter-Urban Roads and Highways	20	100				
Water, sanitation and flood protection	General water, sanitation and flood protection sector	20	100				
Total	•	100					
Themes							
Theme (Maximum 5 and total % must equal 100)							
Major theme	Theme	Theme					
Social protection and risk management	Natural disaster manag	Natural disaster management			100		

100

Total

Additional Financing (Climate Resilience Improvement Project - P157392)

Practice Area (Lead)

Social, Urban, Rural and Resilience Global Practice

# **Contributing Practice Areas**

Transport & ICT, Water

# **Cross Cutting Topics**

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

Sectors / Climate Change								
Sector (Maximum 5 and total % must equal 100)								
Major Sector	or Sector Sector		%	Adaptat Co-bene	ion efits %	Mitigation Co- benefits %		
Water, sanitation and flood protection	Floo	d protection	32	10	0			
Transportation	portation Rural and Inter-Urba Roads and Highway		32	100				
Agriculture, fishing, and forestry Irriga		ation and drainage	36	100				
Total			100	•		•		
Themes								
Theme (Maximum 5 and total % must ed	qual 1	00)						
Major theme	,	Theme			%			
Social Protection and Risk Management	]	Natural Disaster Ma	anagement		100%	100%		
Total 100								
Consultants (Will be disclosed in the Monthly Operational Summary)								
Consultants Required? No								

#### I. Introduction

1. This Project Paper seeks the approval of the Executive Directors to provide an additional credit in the amount of US\$42 million equivalent to the Democratic Socialist Republic of Sri Lanka for the Climate Resilience Improvement Project (CRIP). The Paper also seeks the approval of the Executive Directors for a restructuring of the original project.

2. The CRIP was approved on April 22, 2014, and the Project Development Objective (PDO) is to reduce the vulnerability of exposed people and assets to climate risk and to improve Government's capacity to respond effectively to disasters. The Project includes four project components: Component 1: Development of basin investment plans (US\$13 million); Component 2: Increasing climate resilience of infrastructure (US\$90 million); Component 3: Project implementation (US\$5 million); and Component 4: Contingent emergency response (US\$2 million).

3. The proposed additional financing (AF) will help the Government of Sri Lanka (GoSL) to finance the costs associated with the repair and disaster proofing of irrigation, flood control and road infrastructure that were damaged due to extreme rainfall in December 2014. In addition, financing is required to close a financing gap caused by cost escalation of civil works under the parent project.

4. No changes are proposed to the PDO. The project outputs and annual output targets have been revised to reflect the scaled up activities. Relevant results indicators have been revised to better capture the benefits of the project including additional financing. An implementing unit will be added to the existing project management structure to implement the landslide rectification and slope stabilization interventions of the roads of Uva Province. No changes are proposed in fiduciary management arrangements. Safeguards management arrangements of the parent project remains unchanged.

5. The major change associated with the additional financing is the scale up of component 02 which will result in revisions to; i) implementation schedule; ii) project costs; iii) annual disbursement estimates; iv) results framework (total outputs, annual output targets, and results indicators); and v) implementation arrangements. In addition, OP/BP 4.37 on Safety of Dams will be triggered due to the fact that several flood risk mitigation interventions on irrigation and flood control infrastructure will rely upon the performance of the upstream dams and reservoirs which are the direct source of water storage and supply to those infrastructure. The proposed restructuring of the parent project and AF, and a retroactive triggering of safeguards policy on Safety of Dams (OP/BP 4.37).

#### **II. Background and Project Implementation Status**

#### Background

6. Climate-related hazards pose a significant threat to economic and social development in Sri Lanka. Extreme variability of rainfall and droughts is already a defining feature of Sri Lanka's

climate. Climate projections indicate an increasing rainfall trend in the wet zone and a decreasing rainfall trend in the dry zone, meaning that the risks associated with water-related hazards are likely to increase.

7. Annual average fiscal loss associated with disasters is estimated to be already in excess of US\$380 million, but disaster losses can significantly exceed this amount in a given year. In 2011, floods affected more than a million people in the Northern, North Central and Eastern provinces and caused more than US\$ 600 million in direct damages. Floods in 2012 affected nearly a half a million people and the December 2014 floods affected 1.2 million people and each of these events severely impacted the agriculture sector, destroying crops, livestock and agricultural infrastructure, and the road infrastructure.

8. The GoSL has recognized disaster risk management (DRM) as a priority. The increasing frequency of recurrent disaster events are driving the Government's interest to scale up investments in climate resilience. In recent years, the GoSL has made notable efforts to improve policies, institutions, human resources, technology and tools to enhance the country's knowledge, information and capacity for improved climate related disaster forecasting, preparedness and management. The GoSL is currently making efforts to integrate DRM into its investment plans and is scaling up its investments in risk mitigation. However, larger and more systematic investments in risk mitigation, based on comprehensive understanding of disaster risks are in urgent need and CRIP is addressing this critical gap.

9. The CRIP was conceived based on a detailed screening and analysis of climate and disaster risks in 2013. The project aims to address such risks in identified high risk areas of Sri Lanka. The component 02 addresses the immediate risk mitigation needs, and the component 01 is designed as a long term intervention to address climate risks through rigorous flood and drought risk assessment taking into account the future variability in the climate parameters. The risk mitigation designs under the project are integrated with the recent climate variability in order to make these investments resilient to future extreme events. The project has 100% adaptation benefits while the mitigation co-benefits are negligible.

10. The CRIP is designed as a strategic intervention to assist the GoSL in managing the economic impact of disasters through investments in understanding and reducing disaster risk. The CRIP Component 1 (US\$ 13 million) contributes to building a climate risk-related knowledge base in ten selected river basins and to identifying long term investments that will improve physical resilience to extreme hydro-meteorological events. The component supports comprehensive flood and drought risk modeling, including assessments of expected extremes of water scarcity and excess, inter-annual and intra- seasonal variability of monsoons, duration of droughts, and depletion of ground water resources. Building on these assessments, the component is expected to finance pre-feasibility studies for nearly US\$ 1 billion of investments to reduce disaster risk in selected basins.

11. Component 2 (US\$ 90 million) supports implementation of urgent climate risk mitigation interventions including: i) strengthening of vulnerable irrigation, drainage, and flood control infrastructure (US\$ 47 million); ii) rectification of landslide damages and improvement of the flood discharge capacity of bridges on key road connections (US\$ 36 million); and iii) mitigation

of landslide risk in selected schools (US\$ 7 million). The proposed AF will scale up the Component 2 with additional rehabilitation and risk mitigation investments necessitated by the December 2014 floods.

12. Component 3 (US\$ 5 million) assists the GoSL in project planning, implementation, supervision and monitoring, while Component 4 (US\$ 2 million) provides contingent financing to help the GoSL to respond to natural disasters effectively.

#### Project implementation status

13. As a result of the Presidential elections in January 2015, the project implementation arrangements underwent some changes. The CRIP had been designed to be implemented by the Project Management Unit (PMU) established for the World Bank funded Dam Safety and Water Resources Planning Project (DSWRPP) under the Ministry of Irrigation and Water Resources Management (MIWRM). Following the Presidential elections, the DSWRPP and CRIP were separated and anchored to two separate ministries, causing the CRIP to establish a separate PMU under the MIWRM. The new PMU had to recruit all key staff positions that were shared with DSWRPP under the previous implementation set up. However, the leadership of the PMU and the field implementation arrangements remained unchanged. The CRIP PMU is fully operational with all key staff and is ready to absorb the additional financing related works.

14. The progress towards the achievement of the PDO and the Implementation Progress (IP) have been rated satisfactory throughout the implementation to date. However, there were delays in implementing component 01. The fiduciary, safeguards and monitoring and reporting have been satisfactory. The project implementation has been in compliance with the legal covenants and there are no overdue audit reports or ineligible expenditures. Disbursement during the first year of project implementation reached US\$15 million and an additional US\$30 million worth of physical works is currently under contract with works ongoing.

15. The progress of each of the individual project components is summarized below:

• **Component 01 - Development of Basin Investment Plans:** The GoSL had no prior experience in carrying out comprehensive and complex flood and drought risk modeling at river basin level as designed under this component. In addition, the finalization of the Terms of Reference (ToR) for the key consultancies under the component demanded inputs from a number of technical agencies. This led to delays in finalizing these ToRs and administering the procurement process for hiring consultants. The changes in the ministry portfolios in January 2015 further added to the delays.

The PMU has now awarded one out of the two main consultancy contracts under component 01 for carrying out LiDAR and photogrammetric surveys. These surveys are currently in progress and expected to be completed by December 2016. The technical evaluation to procure the other main consultancy for carrying out detailed flood and drought modeling and developing flood and drought mitigation investment plans is completed and the contract is due to be awarded by the end of March 2016.

• **Component 02 - Increasing Climate Resilience of Infrastructure:** The progress of component 02 has been satisfactory amidst all the changes. This is mainly due to the high level of readiness for implementation at the approval of the parent project. For example, within six months of effectiveness, US\$25 million of physical works contracts were awarded.

As of December 2015, US\$ 30 million worth of contracts have been awarded and work is in progress, while bid evaluation has been completed or in progress for another US\$ 3.4 million of project investments. Preparation of bid documents is in progress for contracts totaling to another US\$ 5.75 million (designs and Bill of Quantities - BOQs completed) and preparation of designs, BOQs and cost estimates is in progress for US\$ 39.5 million worth of contracts. The implementing agencies need to expedite the designs for the remaining works to ensure that they are completed by December 31, 2016.

- **Component 03 Project Implementation:** The PMU is now fully operational after the changes mentioned above and continues to facilitate the project implementation. The PMU recently completed procurement of vehicles and all the IT equipment and software required by the implementing agencies for smooth project implementation.
- Component 04 Contingent Emergency Response Component (CERC): This component has been allocated with US\$ 2 million that can be used by the Government to meet emergency expenditure in time of a disaster.

## **III.** Rationale for Additional Financing

16. The floods and landslides of December 2014 affected 22 out of the 25 districts in the country. Nearly 1.2 million people were affected, 39 people killed and more than 25,000 houses were damaged. The rapid damage assessment conducted by the National Planning Department (NPD) revealed that direct damages to public assets were US\$155 million, including an estimated damage of US\$65.4 million to irrigation and flood control infrastructure and an estimated damage of US\$85 million to the road infrastructure. Provincial roads suffered the most of the damages, especially in Uva Province, amounting to US\$ 70.6 million. The GoSL immediately attended to some of the non-complex and urgent rehabilitation works by mobilizing government's own resources.

17. Following 2014 floods, the Government identified US\$ 22.0 million of flood rehabilitation investments and US\$ 14.0 million of landslide mitigation investments that need to be carried out with special design inputs. In order to undertake these additional works, the Government considered the possibility of reallocating funds through the Contingent Emergency Response Component (CERC) included under the parent project. However, the additional funding requirement was well in excess to the amount that could be reallocated. The Government opted to include the post 2014 disaster rehabilitation investments under CRIP additional financing, especially the critical damages that need special design inputs. This is due to the fact that the

CRIP has been adopting a comprehensive approach to mitigating the risk of floods and landslides while taking into account the potential climate change impacts.

18. Additional Financing would also be needed to address a financing gap related to the flood risk mitigation sub component of the parent project. This cost overrun is due to the following reasons: i) the initial estimates for flood risk mitigation investments were based on the conceptual designs during project preparation. However, after the completion of detailed designs and cost estimates for nearly 80% of the investments, it has been found that the actual cost exceeds the initial estimates by 8% - 10%; ii) The floods occurred in December 2014, caused further damages to the irrigation and flood control infrastructure that were already included in the work program; and iii) the conceptual designs were further improved incorporating climate resilient features to withstand future extreme events, which led to a slightly higher cost for the civil works. Based on the appraisal, it is estimated that the total cost overrun is approximately US\$ 5 million.

19. The proposed additional financing is well aligned with the Bank's "twin goals" of eliminating extreme poverty and boosting shared prosperity through reducing disaster related economic and livelihood losses in regions where the poverty rates are relatively higher. The interventions proposed under the additional financing are located in rural districts of Sri Lanka Agriculture is the main livelihood for these which are home to a majority of poor people. populations and irrigation water is a key contributor to the livelihood and food security under the current climate change challenges. The flood mitigation investments in the selected irrigation and flood control schemes will reduce the livelihood disruption and potential crop loss during the The landslides often create connectivity problems and hinder day-tomonsoonal heavy rains. day socioeconomic activities of rural communities, especially farmers accessing markets to sell their produce and to purchase agricultural inputs. This is a recurring situation in Badulla district where a significant share of the additional financing resources will be invested to stabilize landslides on the provincial roads. Badulla is one of the largest vegetable producing districts of Sri Lanka where a significant proportion of large and small holder tea plantations exist. These road connections vulnerable to landslides provide crucial link between the farms and the markets.

## Consistency with CPS

20. This project is part of a comprehensive program to reduce the economic losses caused by natural disasters, which are estimated to be around US\$380 million annually. The proposed additional financing is well aligned with the Bank's Twin Goals of eliminating extreme poverty and boosting shared prosperity through reducing disaster related economic and livelihood losses in rural districts of Sri Lanka with high poverty. This additional financing is consistent with the Country Partnership Strategy (CPS) 2013-2016 for Sri Lanka (Report 66286-LK), which seeks to improve resilience to climate and disaster risks. It was discussed by the Board of Executive Directors on May 22, 2012 and updated by the CPS Progress Report (Report 84426-LK), discussed by the Board on April 22, 2014. The additional credit will support the CPS priority of reducing the number of people impacted by adverse natural events, especially floods.

# IV. Proposed Changes

#### **Summary of Proposed Changes**

This AF would help scaling up of component 02 of parent project leading to the revision of; i) implementation schedule; ii) project costs; iii) annual disbursement estimates; iv) results framework (total outputs, annual output targets, and results indicators); and v) implementation arrangements. In addition, OP/BP 4.37 on Safety Dams will be triggered for the AF as well as for the parent project retroactively. No changes are proposed to disbursement categories, Credit covenants, safeguard category, fiduciary and safeguard procedures and management arrangements.

Change in Implementing Agency	Yes [] No [X]
Change in Project's Development Objectives	Yes [ ] No [ X ]
Change in Results Framework	Yes [ X ] No [ ]
Change in Safeguard Policies Triggered	Yes [ X ] No [ ]
Change of EA category	Yes [ ] No [ X ]
Other Changes to Safeguards	Yes [ ] No [ X ]
Change in Legal Covenants	Yes [ ] No [ X ]
Change in Loan Closing Date(s)	Yes [ ] No [ X]
Cancellations Proposed	Yes [ ] No [ X ]
Change in Disbursement Arrangements	Yes [ ] No [ X ]
Reallocation between Disbursement Categories	Yes [ ] No [ X ]
Change in Disbursement Estimates	Yes [ X ] No [ ]
Change to Components and Cost	Yes [ X ] No [ ]
Change in Institutional Arrangements	Yes [ X ] No [ ]
Change in Financial Management	Yes [ ] No [ X ]
Change in Procurement	Yes [ ] No [ X ]
Change in Implementation Schedule	Yes [ X ] No [ ]
Other Change(s)	Yes [ ] No [ X ]

#### **Development Objective/Results**

HHDO

## **Project's Development Objectives**

Original PDO

To reduce the vulnerability of exposed people and assets to climate risk and to improve Government's capacity to respond effectively to disasters. The PDO will be achieved through evidence-based investment planning and urgent risk mitigation measures.

Revised PDO: No change to the PDO

# **Change in Results Framework:** Yes

Explanation:

A number of indicators of the results framework have been refined to be able to better capture the project benefits and results. Results and annual output targets have been revised reflecting the additional works added to the original project. The changes made in the results indicators are summarized below.

Indicator in the Revised Indicator		Justification for the change			
original RF					
PDO Level results indic	cators				
Decrease in expected	Area benefitted with	Due to the limitation of hydro-			
annual flood loss from	reduced annual crop	meteorological data and the changing			
5 years return period	losses due to weather	rainfall patterns, calculation of return			
to 25 years	related events in the	periods is challenging. This will make			
	selected schemes	the measuring of the indicator difficult.			
		The revised indicator is easily			
		measurable.			
Reduction in people at	People benefitted	The original indicator has been			
risk to climate related	from reduced weather	reworded for better clarity.			
transport interruptions	related transport				
	interruptions				
Number of schools	Number of school	This indicator was refined to capture			
protected against	children protected	the beneficiaries, which is a better			
landslides	from reduced	indicator over the number of schools			
	landslide risks in	where the risk mitigation investments			
T	selected schools	are implemented.			
Intermediate results ind	licators				
Strategic	Number of risk	The revised indicator reflects the			
Environmental Impact	mitigation feasibility	project results better than the original			
Assessment	studies developed	indicator given that Strategic			
developed		Environmental Assessment will be part			
		of the feasibility studies.			
Length of road side	Length of roads with	The revised indicator makes better			
slopes stabilized	transport connectivity	sense and reflects the actual activities			
against landslides	ensured	implemented. Also it is easier to			
Vulnanahla sahaal	Number of ashaala	The revised indicator provides a better			
vullerable school	number of schools	and of the results of the investments			
landslide	landelidee	The school area protected from			
Tanushue	Tanusnues	Interschool area protected from			
		the results			
		ine results.			

#### Compliance

# Change in Safeguard Policies Triggered

Explanation:

Safeguard policies triggered under the parent project will remain unchanged for AF. However, the implementation experience to date reveals that several flood risk mitigation interventions on irrigation and flood control infrastructure will rely upon the performance of the upstream dams and reservoirs which are the direct source of water storage and supply to those facilities. Failure of these upstream dams could potentially cause damage to infrastructure improved for flood resilience under the project. Therefore, OP/BP 4.37 on Safety Dams will be triggered for the AF as well as for the parent project retroactively.

Current and Proposed Safeguard Policies Triggered:	Current (from Current Parent ISDS)	Proposed (from Additional Financing ISDS)
Environmental Assessment (OP) (BP 4.01)	Yes	Yes
Natural Habitats (OP) (BP 4.04)	Yes	Yes
Forests (OP) (BP 4.36)	No	No
Pest Management (OP 4.09)	No	No
Physical Cultural Resources (OP) (BP 4.11)	Yes	Yes
Indigenous Peoples (OP) (BP 4.10)	No	No
Involuntary Resettlement (OP) (BP 4.12)	Yes	Yes
Safety of Dams (OP) (BP 4.37)	No	Yes
Projects on International Waterways (OP) (BP 7.50)	No	No
Projects in Disputed Areas (OP) (BP 7.60)	No	No

Covenants - Additional Financing ( Climate Resilience Improvement Project - Additional Financing – P157392 )

Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequenc y	Action		
Conditions								
Source of F	'und	Name	Name			Туре		
<u> </u>								

				Risk		PHHH	ISKS
Risk Category	y				Rat	ing (H	(S, M, L)
1. Political and	l Governand	ce		Moderate			
2. Macroecono	omic			Moderate			
3. Sector Strate	egies and Po	olicies			Mo	lerate	
4. Technical D	esign of Pro	oject			Sub	stantial	
5. Institutional	Capacity for	or Implementation a	nd Susta	ainability	Mo	lerate	
6. Fiduciary	6. Fiduciary				Mo	lerate	
7. Environmen	t and Socia	1			Lov	1	
8. Stakeholder	s				Lov	1	
9. Other							
OVERALL					Mo	lerate	
	Finance						
Loan Closing Additional Fi	Date - Add nancing – H	litional Financing ( P157392 )	Climate	e Resilience	Improveme	nt Proj	ect -
Source of Fur	nds		Pro	Proposed Additional Financing Loan Closing Date			
International E	Developmen	t Association (IDA)			30-Ma	y-2019	
Change in Dis	sbursement	Estimates (inclu	ding all	sources of ]	Financing)		
Explanation:		-					
Disbursemen Credit closing	t estimates g date.	will change to t	ake int	o account a	additional f	unds a	nd extension of the
Expected Disl	bursements	(in US\$ Million)(in	ncludin	g all Source	s of Financi	ng)	
Fiscal Year		2016	,	2017	2018	0,	2019
Annual		15		25	45		52
Cumulative		30		55	100		152
Allocations - A	Additional	Financing (US\$ Mi	illion) (	Climate Res	silience Imp	roveme	ent
Project - Add	itional Fina	ancing – P157392 )				l	
Source of	Currency	Category of Expanditure		Allocation		Dis Tot	bursement %(Type al)
runu		Expenditure		Proposed		Pro	posed
IDA	US\$	Goods, works, nor consulting service consultants' servic Training and Worl and Incremental	1- s and ces, kshops	42			100%

		Operating Costs except under Part 4 of the Project		
IDA	US\$	Emergency Expenditures	0	100%
Total:		•	42	100%

#### Change to Components and Cost: Yes

Explanation:

The project components will not change. However, the cost of component 02 (Increasing Climate Resilience of Infrastructure) and component 03 (Project Implementation) will change. The change in the cost of project component 02 is attributed to two main reasons: i) need to scaling up of flood risk mitigation and landslide mitigation investments identified after heavy rainfall spell in December 2014; and ii) estimated cost overrun related to the flood risk mitigation investments included in the parent project. The implementation of the scaled up work program will require additional incremental operating costs. Hence, the cost of project component 03 will be increased. Allocation of additional funds for sub components and the detailed cost breakdown are given in Table 1 and 2 below:

Project Components and Sub	Total IDA	IDA Original	IDA Additional	
Components	Financing	Credit	Financing	
	(US\$ million)	(US\$ million)	(US\$ million)	
1. Development of Basin	13.0	13.0	0.0	
Investment Plans				
2. Increasing Climate Resilience	130.0	90.0	40.0	
of Infrastructure				
Flood Risk Mitigation	74.0	47.0	27.0	
Transport Continuity	49.0	36.0	13.0	
School Protection	7.0	7.0	0.0	
3. Project Implementation	7.0	5.0	2.0	
4. Contingent Emergency Response	2.0	2.0	0.0	
Total Cost	152.0	110.0	42.0	

#### Table 1: Additional financing allocation for project components

Table 2: Detailed	cost breakdown	of additional	financing
Lable <b>I</b> Detalled	cost si cultuo n li	or additional	mancing

Category of Expenditure	Description	Amount (US\$ million)
Civil Works	Flood risk mitigation works	22.0
Civil works	Landslide rectification works	10.5
	Cost over-run of flood risk mitigation works of the	
	parent project	5.0
	Subtotal	37.5
Goods	Instruments for landslide monitoring	1.0

	Office furniture and equipment for PIU of UPC					
	Vehicles and machinery		1.0			
		Subtotal	2.1			
Consultancy Services	Consultancy for design and construction supervision landslide rectification works	vision of	0.5			
		Subtotal	0.5			
Non-consulting	Surveys and Investigations		0.3			
Services		Subtotal	0.3			
Training and	Training and Workshops on Climate Resilient Development		0.2			
Workshops		Subtotal	0.2			
Incremental	Project management and monitoring		1.4			
Operating Costs		Subtotal	1.4			
		TOTAL	42.0			

**Other Change(s)** 

#### **Change in Institutional Arrangements**

#### Explanation:

In the parent project, the implementation arrangements include a central PMU which oversees and manages the project implementation and funds, and four Implementing Units as part of the PMU, established at the relevant implementing agencies.

The only change in the institutional arrangement under the AF is consequent to the inclusion of landslide mitigation interventions of Uva provincial roads. All the other project implementation arrangements related to FM, disbursements, procurement, safeguards and M & E will remain unchanged.

In order to implement the new landslides mitigation works, the Project Implementation Unit (PIU) that had been established for the recently closed, Bank financed Provincial Roads Project (PRP) will be reorganized and linked to the current CRIP implementing structure. This will continue to be located at the Road Development Department (RDD) of Uva Provincial Council (UPC), and will be headed by a Deputy Project Director (DPD). It will function similar to the current PIU at the Road Development Authority (RDA), which executes similar landslide mitigation interventions on the National Roads. The responsibilities of this new PIU include; designs, procurement, construction supervision and payments. A diagram showing the project implementation arrangements with additional financing is given in Annex 3.

#### **Change in Financial Management**

Explanation:

The overall FM arrangements under the parent project will be applicable for the additional financing also. A separate Designated Account (DA) will be maintained by the PMU for the additional financing Credit. Funds will be transferred by IDA to the DA using report based disbursements. Separate Interim Unaudited Financial Reports (IUFRs) will be submitted by the PMU for the replenishment of the DA. The PMU and the spending units will open separate LKR accounts and will maintain a separate set of books for additional financing. As in the original Credit, the external audit will be carried out by the Auditor General of Sri Lanka and a consolidated audit report for both the original Credit and additional financing will be submitted to the WB by the PMU within six months of end of the financial year. The Incremental Operating Costs (IOC) of the PMU and the other spending agencies included under the parent project would be first absorbed by the original credit and once the category is fully spent, the IOC of additional financing would be used. The IOC related to the PIU of Uva RDD will be fully absorbed by the additional financing.

The financial management performance of the PIU under the Provincial Roads Project had been satisfactory and is well versed with the WB FM procedures and guidelines. Under this project, this PIU would function as a spending unit for the activities executed by them. The PMU will transfer funds to the PIU, and PIU will manage the payments related to its contracts. This PIU will also be responsible for; maintaining a dedicated bank account for the project, maintaining separate books of accounts, reporting back on expenditures incurred to PMU, and providing information required for internal and external audit.

#### Change in Procurement

Explanation:

The procurement arrangements under the parent project will be applicable for the additional financing also. The PMU and the PIUs have gained sufficient experience in procurement and the performance has been satisfactory. The PMU has prepared a separate procurement plan for the additional financing satisfactory to the Bank and will update the same every six months.

The PIU of Uva RDD gained sufficient experience in carrying out procurement and managing contracts following WB procedures under the PRP. Given that large International Competitive Bidding (ICB) contracts are not envisaged under this project, the newly added PIU will have capacity to manage the procurement for the medium scale landslide mitigation investments to be implemented by the Uva RDD.

## Change in Implementation Schedule

Explanation:

The work plan, including the implementation schedule, has been updated to reflect the activities of the parent project as well as the AF.

#### **Appraisal Summary**

#### Economic and Financial Analysis

Explanation:

A comprehensive Economic Analysis was carried out for the investments under the parent project. The analysis found that the project leads to a net present value (NPV) of \$57 million (using a 12% discount rate) and an internal rate of return (IRR) of 22.7% over a period of 20 years of project life. The results show that the probability of IRR falling below 12% is zero. The IRR of the flood mitigation sub component and the transport connectivity sub component of the parent project were 30.4% and 16% respectively. Given that the new investments proposed under this AF are very similar to those in the parent project, it is unlikely that the IRR with the new investments will be significantly different from the original project.

The original economic analysis of the flood mitigation sub component was rerun including the cost overrun of US\$ 5 million which resulted in a new IRR value of 27 % for the particular sub component.

#### Technical Analysis

Explanation:

The activities to be funded under the AF are similar in nature to the activities included in the Component 2 of the parent project, thus no new skills or technical expertise for implementation will be required.

The scope of the landslide mitigation interventions on the roads managed by the Road Development Department (RDD) of Uva province is similar to that of the ongoing landslide mitigation works on national highways implemented by the Road Development Authority (RDA). These works demand special geological and geotechnical expert inputs for design, construction and supervision. The RDA obtains these expert inputs from the NBRO which has demonstrated capacity in landslide mitigation for more than 15 years. Therefore, the same arrangement will continue for the landslide mitigation works included under the additional financing.

Similar to the parent project, the flood mitigation interventions will be implemented by the Irrigation Department (ID) and the Mahaweli Authority of Sri Lanka (MASL). The scope of civil works under the flood mitigations investments includes; strengthening of damaged and weak sections of flood protection embankments, improvements to irrigation and drainage canals, and other related facilities. The ID and MASL have demonstrated sufficient technical capacity to design and implement these works with required quality standards. The engineers from these two agencies have gained sufficient knowledge and experience in incorporating climate resilient features into the new designs through the engagement with CRIP. Therefore, the two agencies will continue to implement the flood mitigation investments under the AF.

Landslides have become a recurring phenomenon and 10 districts out of the 25 districts have been identifies as vulnerable to landslides. It is important to strengthen the Government's capacity to protect the communities and property from landslides risk in those districts. The NBRO is the

mandated national agency to identify, monitor and mitigate the landslides risk and NBRO's capacity to be enhanced especially in the area of landslide investigation and monitoring. Therefore, the project will provide necessary geotechnical equipment to NBRO for this purpose. As such, additional financing includes strengthening of the capacity of NBRO with necessary geotechnical investigation equipment and instruments in order to identify and monitor the landslide risk in the districts prone to landslides.

In addition, the RDD of Uva province will be provided with machinery and equipment to be able to efficiently respond to potential landslides.

## Cost overrun:

Additional Financing would also be needed to address a financing gap related to the flood risk mitigation sub component of the parent project. This cost overrun is due to the following reasons: i) the initial estimates for flood risk mitigation investments were based on the conceptual designs during project preparation. However, after the completion of detailed designs and cost estimates for nearly 80% of the planned investments, it has been found that the actual cost exceeds the initial estimates at the project preparation by 08% - 10%; ii) The floods occurred in December 2014, caused further damaged to the irrigation and flood control infrastructure that were already included in the work program; and iii) the conceptual designs were further improved incorporating climate resilient features to withstand future extreme events which led to a slightly higher cost for the civil works. Based on the appraisal, it is estimated that the total cost overrun is US\$ 5 million.

## Social Analysis

## Explanation:

*Social Safeguards:* The additional financing is not expected to result in changes to the social analysis of CRIP and will not trigger new social safeguards policies. Also no complex social safeguard issues have been encountered to date. The Social Management Framework (SMF) has been prepared and is currently under implementation. This SMF will continue to be applicable to the project. The SMF outlines the processes and serves as a guideline to undertake social assessments and/ or resettlement action plans as required.

At present the implementing agencies have identified a long list of activities under each type of risk mitigation interventions, and the preliminary investigations are underway. These investigations would lead to a final list of investments to be financed by the AF, for which the detailed designs would be carried out. During the detailed designs, sub project specific social assessments will be undertaken for all activities and the resettlement action plans will be developed as required. Necessary risk management measures will be implemented in accordance with the framework.

*Gender:* A gender analysis was carried out as part of the Social Assessment and the preparation of the SMF. Gender considerations will be made an integral part of the sub-project planning for drainage and irrigation infrastructure. In particular, gender impacts will be one of the considerations associated with the selection of sub-projects to ensure that infrastructure improvements provide equal proportional benefits to men and women.

*Citizen Engagement:* The project is adopting a mechanism to involve communities and their representatives in making decisions and for ensuring greater positive impact. For the participatory planning processes under Components 2, the PMU has adopted a citizen engagement strategy to give voice and opportunity to various stakeholders in the planning process, with walk-through-surveys being one of the measures used. Extensive stakeholder consultation has been built in to the design of the component 01 activities. The citizen engagement strategy also includes the use of citizen's monitoring committees (e.g. headed by Farmer Organizations in respect of irrigation activities; and Parent-Teacher Associations in respect of landslide mitigation activities in schools) that review and follow up on quality, safety and completion aspects of the interventions.

*Grievance Redress Mechanisms (GRM):* Communities and individuals who believe that they are adversely affected by a World Bank (WB) 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 can 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 GRS, please visit <u>http://www.worldbank.org/GRS</u>. For information on how to submit complaints to the World Bank Inspection Panel, please visit <u>www.inspectionpanel.org</u>.

#### **Environmental Analysis**

Explanation:

The CRIP overall is environmentally beneficial and so is the additional financing investments. The flood risk and landslide mitigation interventions proposed under the AF are similar to those already being financed under the parent project. The project continues to be classified as Environmental Category B.

Safeguard policies triggered under the parent project will remain unchanged for AF. However, the implementation experience to date reveals that several flood risk mitigation interventions on irrigation and flood control infrastructure will rely upon the performance of the upstream dams and reservoirs which are the direct source of water storage and supply to those facilities. Failure of these upstream dams could potentially cause damage to infrastructure improved for flood resilience under the project. Therefore, OP/BP 4.37 on Safety of Dams will be triggered for the AF as well as for the parent project retroactively.

Since 2008 to date, the GoSL has been implementing a national dam safety assurance program with financial assistance from the World Bank through the Dam Safety and Water Resources Planning Project (DSWRPP). During the preparation of the DSWRPP, the GoSL employed international consultants and local experts to carry out a comprehensive risk assessment of all major dams of the country. Based on this assessment, a total of thirty two (32) major dams identified as high and moderate safety risks were selected for intensive safety remedial

interventions under the DSWRPP. The GoSL has added thirty (30) more dams to the program for safety interventions with the additional financing approved in 2014. Under the DSWRPP, the GoSL has engaged international consultants and local experts acceptable to the Bank to: carry out full level dam safety inspections and geotechnical and hydrological studies; design safety assurance and remedial works; install dam safety monitoring instrumentation; supervise the execution of civil and electro-mechanical safety assurance works; and prepare detailed operation and maintenance manuals for the dams included in the project. In addition, the designs and execution of the civil and electro-mechanical works and instrumentation are being carried out under the guidance and supervision of an independent dam safety review panel with a Terms of Reference (ToR) approved by the Bank. This panel consists of technical professionals from related engineering disciplines and has been endorsed by the Bank. The records of the technical inspections and investigations, hydrological studies, detailed designs of dam safety remedial works, construction drawings, and O&M manuals are available with the agencies responsible for managing these dams. Two of the three concerned dam owner agencies are also the implementing agencies of CRIP, which are the ID and the MASL.

All dams that are hydrologically connected with the flood risk mitigation investments of the parent project and the AF have been included in the DSWRPP and intensive measures have been taken under the DSWRPP to address the risks related to the safety of those dams. Given that there is an ongoing and effective dam safety program dealing with the full-level inspections, dam safety assessments, and safety remedial measures have already been conducted and details are documented by the GoSL satisfactorily to the Bank, the provisions of OP/BP4.37 on Dam Safety has been complied with for all the relevant dams related to the AF and the parent project. Therefore, while the Dam Safety OP 4.37 will be triggered, no specific action will be necessary under the project to implement the requirements of the OP 4.37.

An Environmental Management Framework (EMF) has been prepared for the parent project and is currently under implementation. The EMF has been updated and was disclosed on January 8, 2016 in country and on January 11, 2016 in the Infoshop reflecting the inclusion of the Dam Safety OP 4.37. This EMF will continue to be applicable to the AF also. This EMF focuses on the planning, design and implementation of specific civil works associated with flood risk mitigation and transport continuity interventions in the selected irrigation, flood control, transport infrastructure and school buildings. This framework outlines the processes and serves as a guideline to undertake environmental assessments (EAs) and/or environmental management plans (EMPs) as required.

At present the implementing agencies have identified a long list of activities under each type of risk mitigation interventions, and the preliminary investigations are underway. These investigations would lead to a final list of investments to be financed by the AF, for which the detailed designs would be carried out.

During the detailed designs, EAs and EMPs will be developed for all the sub projects. Environmental risk management measures outlined in the EMPs will be integrated in the construction. In addition, the PMU will examine the available documentation and compile the details of dam safety remedial interventions carried out under the DSWRPP for the dams related with the subprojects for record purposes. If additional measures are deemed necessary for any dam(s), the PMU will work closely with the DSWRPP to ensure that safety of those dams are addressed under the ongoing DSWRPP.

As in the parent project, the overall responsibility for safeguards management will rest with the PMU, while the PIUs will have a safeguards focal point who will work closely with the social and environment specialists of the PMU.

#### Risk

Explanation:

Risks identified under CRIP have been managed well and there is no change to the overall risk rating which is moderate. The risk categories: political and governance, macroeconomic, sector strategies and policies will continue to be rated as moderate. The risk related to the technical design continues to be rated substantial given the technical complexity of the landslide rectification measures to be implemented. In order to mitigate this risk, the National Building Research Organization (NBRO), which has got significant expertise and experience in designing and implementing landslide risk mitigation measures will continue to provide design and construction supervision inputs. In addition, the support of an international expert will be obtained to review the designs completed by the NBRO engineers. The institutional capacity for implementation and sustainability, and fiduciary risks will remain as moderate, while the environment and social, and the stakeholder risks will remain as low. With regards to stakeholder risk, this this was recently upgraded to low as a result of the recently stability that has taken hold in the government structure in the aftermath of the political changes

# ANNEX 1: REVISED RESULTS FRAMEWORK AND MONITORING INDICATORS

Revisions to the Resu	lts Framework	Comments/ Rational for Change
PDO		•
Current (PAD)	Proposed	
PDO is to reduce the vulnerability of	No Change	
exposed people and assets to climate risk		
and to improve Government's capacity		
to respond effectively to disasters.		
PDO indicators		
Current (PAD)	Proposed	
Indicator 1: Decrease in expected	Area Benefitted with reduced	Due to the limitation of hydro-meteorological data and the changing
annual flood loss from 5 years return	annual crop losses due to	rainfall patterns, calculation of return periods is challenging. This will
period to 25 years	weather related events in the	make the measuring of the indicator difficult. The revised indicator is
	selected schemes	easily measurable.
Indicator 2: People benefitted from	Reduction in people at risk to	The original indicator has been reworded for better clarity.
reduced weather related transport	weather related transport	
Interruptions	interruptions	
Indicator 3: Number of schools	Number of school children	This indicator was refined to capture the beneficiaries, which is a better
protected against landslides	protected from reduced landslide	indicator over the number of schools where the risk mitigation investments
Indicator 4. Development of basin	No Change	
investment plans that are based on	No Change	
integrated understanding of climate risk		
integrated understanding of enhate fisk		
Intermediate indicators	•	
Current (PAD)	Proposed	
Improved Understanding of Flood and Dr	ought Risk in Selected Basins	
Indicator 5: Number of MIWRM staff	No Change	
trained in modeling climate risks		
<b>Indicator 6:</b> Flood and drought risk	No Change	
models developed	-	

<b>Indicator 7:</b> DEM and hydro-	No Change	
meteorological data for the nine basins	C C	
collected and compiled for analysis		
Indicator 8: Strategic Environmental	Risk mitigation feasibility	The revised indicator reflects the project results better than the original
Impact Assessment developed	studies developed	indicator given that Strategic Environmental Assessment will be part of the
		feasibility studies.
Reduced Flood Risk		
Indicator 9:Local flood risk analyses	No Change	
and modeling to support immediate		
mitigation		
<b>Indicator 10:</b> Detailed flood mitigation	No Change	
designs completed		
Indicator 11: Length of improved	Revised	The target values have been revised to reflect the investments made under
distribution canals		the additional financing
<b>Indicator 12:</b> Number of improved	Revised	The target values have been revised to reflect the investments made under
structures in distribution canals		the additional financing
<b>Indicator 13:</b> Length of improved flood	Revised	The target values have been revised to reflect the investments made under
drainage canal		the additional financing
Indicator 14: Length of rehabilitated	Revised	The target values have been revised to reflect the investments made under
flood bund		the additional financing
Indicator 15: Length of improved spill	Revised	The target values have been revised to reflect the investments made under
tail canal		the additional financing
Indicator 16: Number of improved	Revised	The target values have been revised to reflect the investments made under
culverts and small bridges		the additional financing
<b>Indicator 17:</b> Length of improved farm	Revised	The target values have been revised to reflect the investments made under
link roads		the additional financing
Improved Transport Continuity		
Indicator 18: Detailed road slope	No Change	
stabilization and bridge designs		
completed		
Indicator 19: Number of bridges raised	No Change	
and causeways replaced		
<b>Indicator 20:</b> Length of road side slopes	Length of roads with transport	The revised indicator makes better sense and reflects the actual activities
stabilized against landslides	connectivity ensured	implemented. Also it is easier to measure.
Improved School Safety		

<b>Indicator 21:</b> Vulnerable school areas	Number of schools protected	The revised indicator provides a better sense of the results of the
protected from landslide	against landslides	investments. The school area protected from landslides is not the best way
		to reflect the results.
Indicator 22: Detailed landslide	No Change	
stabilization designs completed		
Citizen Engagement		
<b>Indicator 23:</b> Beneficiaries that feel	New Indicator	This indicator has been added to monitor citizen engagement in the project
project investments reflect their need		

# ANNEX 2: UPDATED PROJECT RESULTS FRAMEWORK

<b>Project Deve</b>	lopment Objectives						
Original Proje	ect Development Objective - Pare	ent:					
The Project De capacity to resp	evelopment Objective (PDO) is to re pond effectively to disasters.	duce the	vulnerability of exp	osed people an	d assets to climat	te risk and to improv	ve Government's
Proposed Proj	ject Development Objective - Ad	lditional	Financing (AF): N	lo Change			
Results							
Core sector in	idicators are considered: No		Res	ults reporting	level: Project L	evel	
Project Deve	lonment Objective Indicators						
Status	Indicator Name	Core	Unit of Measure	T	Baseline	Actual(Current)	End Target
Revised	Proposed: Area Benefitted with		Hectare(Ha)	Value	0.00	0.00	149,000
	reduced annual crop losses due to weather related events in the			Date	05-Aug-2014	01-Dec-2015	30-May-2019
	selected schemes			Comment			
	Current: Decrease in expected		Hectare(Ha)	Value	0.00	0.00	123,000
	annual flood loss from 5 years return period to 25 years			Date	01-Apr-2014	10-Aug-2015	31-May-2018
	F F			Comment			
Revised	Proposed: Reduction in people		Number	Value	0.00	0.00	1,220,000
	at risk to weather related transport interruptions			Date	05-Aug-2014	01-Dec-2015	30-May-2019
				Comment			
	Current: People benefitting		Number	Value	0.00	0.00	721,000
	from reduce weather related transport interruptions			Date	01-Apr-2014	10-Aug-2015	31-May-2018
				Comment			

Revised Pro chil redu sele <u>Cur</u> pro	Proposed: Number of school		Number	Value	0.00	0.00	29000.00
	children protected from reduced landslide risks in			Date	05-Aug-2014	01-Dec-2015	30-May-2019
	selected schools			Comment			
	Current: Number of schools		Number	Value	0.00	0.00	18.00
	protected against landslides			Date	01-Apr-2014	10-Aug-2015	31-May-2018
				Comment			
No Change	Development of basin		Number	Value	0.00	0.00	9.00
	investment plans that are based on integrated understanding of			Date	01-Apr-2014	01-Dec-2015	30-May-2019
	climate risk			Comment			
Intermediate H	Results Indicators		•	•	•		
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
No Change	Number of MIWRM staff trained in modeling climate risks		Number	Value	0.00	0.00	20.00
No Change	Flood and drought risk models developed		Percentage	Value	0.00	0.00	100.00
				Date	01-Apr-2014	10-Aug-2015	31-May-2017
				Comment			
No Change	DEM and hydro-		Percentage	Value	0.00	0.00	100.00
	meteorological data for the nine basins collected and			Date	01-Apr-2014	10-Aug-2015	31-May-2016
	compiled for analysis			Comment			
Revised	Proposed: Risk mitigation		Number	Value	0.00	0.00	15.00
	feasibility studies developed			Date	05-Aug-2014	01-Dec-2015	30-May-2019
				Comment			

	<u>Current</u> : Strategic Environmental Assessment developed	Number	Value	0.00	0.00	1.00
			Date	01-Apr-2014	10-Aug-2015	31-May-2017
			Comment			
No Change	Local flood risk analyses and	Percentage	Value	0.00	30.00	100.00
	modeling to support immediate		Date	01-Apr-2014	10-Aug-2015	31-Dec-2018
			Comment			
No Change	Detailed flood mitigation	Percentage	Value	0.00	30.00	100.00
	designs completed		Date	01-Apr-2014	10-Aug-2015	31-Dec-2018
			Comment			
Revised	<u>Proposed</u> : Length of improved distribution canals	Kilometers	Value	0.00	60.00	780.00
			Date	01-Apr-2014	10-Aug-2015	30-May-2019
			Comment			
	<u>Current</u> : Length of improved distribution canals	Kilometers	Value	0.00	60.00	643.00
			Date	01-Apr-2014	10-Aug-2015	30-May-2018
			Comment			
Revised	Proposed: Number of improved structures in distribution canals	Number	Value	0.00	600.00	6820.00
			Date	01-Apr-2014	10-Aug-2015	30-May-2019
			Comment			
	<u>Current</u> : Number of improved structures in distribution canals	Number	Value	0.00	600.00	4634.00
			Date	01-Apr-2014	10-Aug-2015	30-May-2018
			Comment			
Revised	<u>Proposed</u> : Length of improved flood drainage canal	Kilometers	Value	0.00	20.00	882.00
			Date	01-Apr-2014	10-Aug-2015	30-May-2019

			Comment			
	Current: Length of improved	Kilometers	Value	0.00	20.00	778.00
	flood drainage canal		Date	01-Apr-2014	10-Aug-2015	30-May-2018
			Comment			
Revised	Proposed: Length of	Kilometers	Value	0.00	5.00	400.00
	rehabilitated flood bund		Date	01-Apr-2014	10-Aug-2015	30-May-2019
			Comment			
	<u>Current</u> : Length of rehabilitated	Kilometers	Value	0.00	5.00	399.00
	flood bund		Date	01-Apr-2014	10-Aug-2015	30-May-2018
			Comment			
Revised	Proposed: Length of improved	Kilometers	Value	0.00	43.00	185.00
	spill tail canal		Date	01-Apr-2014	10-Aug-2015	30-May-2019
			Comment			
	Current: Length of improved	Kilometers	Value	0.00	43.00	173.00
	spill tail canal		Date	01-Apr-2014	10-Aug-2015	30-May-2018
			Comment			
Revised	Proposed: Number of improved	Number	Value	0.00	22.00	95.00
	culverts and small bridges		Date	01-Apr-2014	10-Aug-2015	30-May-2019
			Comment			
	Current: Number of improved	Number	Value	0.00	22.00	89.00
	culverts and small bridges		Date	01-Apr-2014	10-Aug-2015	30-May-2018
			Comment			
Revised	Proposed: Length of improved	Kilometers	Value	0.00	27.00	160.00

	link roads			Date	01-Apr-2014	10-Aug-2015	30-May-2019
	<u>Current</u> : Length of improved link roads			Comment			
			Kilometers	Value	0.00	27.00	109.00
				Date	01-Apr-2014	10-Aug-2015	30-May-2018
				Comment			
No Change	Detailed road side slope		Percentage	Value	0.00	30.00	100.00
	stabilization and bridge designs completed			Date	01-Apr-2014	10-Aug-2015	31-Dec-2017
				Comment			
No Change	Number of bridges raised and causeways replaced		Number	Value	0.00	0.00	12.00
				Date	01-Apr-2014	10-Aug-2015	30-May-2019
				Comment			
Revised	<u>Proposed</u> : Length of roads with transport connectivity ensured		Kilometers	Value	0.00	0.00	410.00
				Date	05-Aug-2014	01-Dec-2015	30-May-2019
				Comment			
	Current: Length of road side		Kilometers	Value	0.00	0.00	3.03
	slopes stabilized against landslides			Date	01-Apr-2014	10-Aug-2015	31-May-2018
				Comment			
Revised	Proposed: Number of schools protected against landslides		Number	Value	0.00	0.00	18.00
				Date	05-Aug-2014	01-Dec-2015	30-May-2019
				Comment			
	Current: Vulnerable school		Hectare (Ha)	Value	0.00	0.00	5.85
	areas protected from landslide			Date	01-Apr-2014	10-Aug-2015	31-May-2018
				Comment			

No Change Detailed landslide stabiliz designs completed	Detailed landslide stabilization	Percentage	Value	0.00	30.00	100.00
	designs completed		Date	01-Apr-2014	10-Aug-2015	31-May-2016
			Comment			
New	Beneficiaries that feel project	Percentage	Value	0.00	0.00	75.00
	investments reflect their needs		Date	01-Apr-2014	10-Aug-2015	30-May-2019
			Comment			
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# **ANNEX 3: PROJECT IMPLEMENTATION ARRANGEMENTS**

In the parent project, the implementation arrangements include a central PMU which oversees and manages the project implementation and funds, and four Implementing Units as part of the PMU, established at the relevant implementing agencies.

The only change in the institutional arrangement under the AF is consequent to the inclusion of landslide mitigation interventions of Uva provincial roads. All the other project implementation arrangements for FM, disbursements, procurement, safeguards and M & E will remain unchanged.

In order to implement the new landslides mitigation works, the Project Implementation Unit (PIU) that had been established for the recently closed, Bank financed Provincial Roads Project (PRP) will be reorganized and linked to the current CRIP implementing structure. This will continue to be located at the Road Development Department of Uva Provincial Council, and will be headed by a Deputy Project Director (DPD). It will function similar to the current PIU at the Road Development Authority (RDA), which executes similar landslide mitigation interventions on the National Roads. The responsibilities of this new PIU include; responsibilities of designs, procurement, construction supervision and payments. Below diagram shows the project implementation arrangements with additional financing.



Figure A3 – 1: CRIP Implementation structure with additional financing