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R2017-0058/1

March 7, 2017

<p>Closing Date: Friday, March 24, 2017 at 6 p.m.</p>
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FROM: Vice President and Corporate Secretary

Uruguay - Road Rehabilitation and Maintenance Program

Restructuring and Additional Financing

Program Paper

Attached is the Program Paper regarding proposed restructuring and additional loan to Uruguay for the Road Rehabilitation and Maintenance Program (R2017-0058), which is being processed on an absence-of-objection basis.

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Report No: 112267-UY

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM PAPER

ON A

PROPOSED RESTRUCTURING AND ADDITIONAL LOAN

IN THE AMOUNT OF US\$70 MILLION

TO THE

ORIENTAL REPUBLIC OF URUGUAY

FOR A

ROAD REHABILITATION AND MAINTENANCE PROGRAM

March 3, 2017

Transport and ICT Global Practice
Latin America and the Caribbean Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective February 22, 2017)

UYU1 = US\$0.0357

UYU27.98 = US\$1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ACGs	Anti-Corruption Guidelines
AF	Additional Financing
AIN	<i>Auditoria Interna de la Nacion</i> - Internal Audit Office
CAF	<i>Corporacion Andina de Fomento</i> – Latin America Development Bank
CGN	<i>Contaduria General de la Nacion</i> – National Accounting Office
CPF	Country Partnership Framework
CREMA	<i>Contratos de Rehabilitacion y Mantenimiento</i> – Road rehabilitation and maintenance performance-based contracts
CVU	<i>Corporacion Vial del Uruguay</i> – Uruguay Road Corporation
DEGAC	<i>Departamento de Gestión ambiental y de la Calidad</i> - MTOP's Road Department unit in charge of environment and quality management
DINAMA	<i>Dirección Nacional de Medio Ambiente</i> – Environmental Department (MVOTMA)
DINAPLO	<i>Dirección Nacional de Planificación y Logística</i> – Planning and Logistics Department
DLI	Disbursement-Linked Indicator
DLR	Disbursement-Linked Result
DNTop	<i>Dirección nacional de Topografía</i> – Topographic Surveying Department
DNV	<i>Dirección Nacional de Vialidad</i> – Road Department
EM	DNV's Environmental Manual
EMP	Environmental Management Plan
ESSA	Environmental and Social Systems Assessment
FOCEM	<i>Fondo para la Convergencia Estructural del MERCOSUR</i> – Fund for the structural convergence of MERCOSUR
FONPLATA	<i>Fondo Financiero para el Desarrollo de la Cuenca del Plata</i> – Fund for the development of the Rio del Plata basin
GoU	Government of the Oriental Republic Uruguay
GRS	Grievance Redress Service
HDM	Highway Development and Management Model
IADB	Inter-American Development Bank
IES	<i>Indice de Estado de Superficie</i> – Road pavement index
IFIs	International Financial Institutions
IP	Project Implementation
IRI	International Roughness Index
M&E	Monitoring and Evaluation
MEF	<i>Ministerio de Economía y Finanzas</i> – Ministry of Economy and Finances

MTOP	<i>Ministerio de Transporte y Obras Publicas</i> – Ministry of Transport and Public Works
MVOTMA	<i>Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente</i> – Ministry of Housing, Land Planning and Environment
NRMP	National Road Maintenance Program
ONSC	<i>Oficina Nacional de Servicio Civil</i> - National Civil Service Bureau
OPP	<i>Oficina de Planeamiento y de Presupuesto</i> - Planning and Budget Office
PAD	Program Appraisal Document
PAP	Program Action Plan
PDO	Program Development Objective
PforR	Program for Results
PFS	Program Financial Statements
PPP	Public Private Partnership
TCR	<i>Tribunal de Cuentas de la Republica</i> – State Court of Accounts
TOCAF	<i>Texto Ordenado de Contabilidad y Administración Financiera</i> – Procurement and public financial management code
UNASEV	<i>Unidad Nacional de Seguridad Vial</i> – National road safety unit

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ORIENTAL REPUBLIC OF URUGUAY

ROAD REHABILITATION AND MAINTENANCE PROGRAM

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ORIENTAL REPUBLIC OF URUGUAY

ROAD REHABILITATION AND MAINTENANCE PROGRAM

ADDITIONAL FINANCING DATA SHEET

Basic Information - Additional Financing (AF)						
Country Director: Jesko Hentschel			Sectors: Roads (90%), General			
Practice Manager/ Senior GP Director:			transportation Sector (10%)			
Shomik Mehndiratta / Jose Luis			Themes: Export development and			
Irigoyen			competitiveness (100%)			
Team Leader: Gregoire Gauthier			Expected Effectiveness Date: 5/1/2017			
Program ID: P162110			Expected Closing Date: 6/30/2020			
Basic Information - Original Program						
Program ID: P125803			Effectiveness Date: 4/16/2013			
Program Name: Road Rehabilitation			Expected Closing Date: 6/30/2020			
and Maintenance Program						
Lending Instrument: Program for						
Results						
AF Project Financing Data						
[X] Loan [] Credit [] Grant [] Other:						
Proposed terms: Will be discussed at negotiations.						
AF Financing Plan (US\$m)						
Source			Total Amount (US \$m)			
Total Program Cost:			755.4			
Cofinancing:			301.0			
Borrower:			454.4			
Total Bank Financing:			70.0			
IBRD						
Client Information						
Recipient: Oriental Republic of Uruguay						
Responsible Agency: Ministry of Transport and Public Works						
Contact Person: Arq. Rafael Ferrando						
Telephone No.:+598 2915-8333						
Fax No.: -						
Email: gustavo.ferrando@mtop.gub.uy						
AF Estimated Disbursements (Bank FY/US\$m)						
FY	FY18	FY19	FY20			
Annual	20	20	30			
Cumulative	20	40	70			
Project Development Objective and Description						

Article 5.01- Article V	Effectiveness condition: That the Subsidiary Agreement has been amended in manner acceptable to the Bank.	
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I. INTRODUCTION

1. This Program Paper seeks the approval of the Executive Directors to (i) provide an additional loan in the amount of US\$70 million to the Uruguay Road Rehabilitation and Maintenance Program (P125803); and (ii) process a Level One restructuring of the Program, consisting of a modification to the Program Development Objective (PDO).
2. The proposed additional loan would help finance the expenditures associated with a scaling-up of Program results, in order to enhance the impact of this well-performing Program. The proposed Level One restructuring would modify the PDO to define a more ambitious target for the overall Uruguay road network conditions.
3. This Program Paper also reflects: (i) a modification of the Result Framework, adding a new Disbursement Linked Indicator (DLI) on road safety and new Disbursement-Linked Results (DLRs) on institutional strengthening; (ii) the modification of the Program road safety activities; (iii) the extension of the Program closing date; and (iv) the extension of the original loan closing date to June 30, 2020, to coincide with the closing date of the proposed additional loan. In addition, a new Program Action Plan (PAP) is defined, resulting from the Program systems' incremental assessments.
4. Expected outcomes stemming from this proposed additional financing and restructuring include improvements to the Uruguay national road network's overall condition, for better connectivity and more efficient logistics and trade, increased road safety and enhanced climate-resilience of the Uruguay national roads.

II. BACKGROUND AND RATIONALE

5. **Background.** Highway infrastructure in good condition is critical for the competitiveness of Uruguay's economy and its aspiration to become a Southern Cone logistics platform¹. The quality of road infrastructure is a key enabler of logistics services, as about 95 percent of cargo (in ton-kilometers) are transported by road. Transportation costs still severely hamper logistic efficiency and export competitiveness, calling for continued support for better national roads condition. Road-based transport costs represent up to 70 percent of total logistic costs in some of the most relevant logistic chains.² The average cost of a ton-kilometer transported by road in Uruguay is estimated at US\$0.19, while international benchmarks range between US\$0.08 and US\$0.10, making Uruguay's road transportation at least twice as expensive compared to best performers.
6. The Uruguay 2013-2016 National Road Rehabilitation and Maintenance Program (NRMP), supported by the Program, has reduced the rate of deterioration of Uruguay's road network. Since 2013, about US\$ 500 million have been invested in roads through the NRMP to maintain the 9,000 km of the Uruguay national road network and to rehabilitate more than 500 km of highways. Prior to the initiation of the NRMP, 35 percent of the road network was in good or very good condition; today, it is estimated that about 40 percent of the national road network is in good or very good condition.

¹ Uruguay, as a small open economy, has set itself as a long-term to position the country as a logistics hub and center of excellence for countries in the southern cone.

² Soybean logistics – Argentina, Paraguay, Uruguay. World Bank, 2016

7. Further, the Government of Uruguay, elected in 2015, has scaled-up the priority given to transport infrastructure upgrading, as evidenced by several concrete actions. First, the Ministry of Transport and Public Works (MTOP) budget for roads has been increased by about 20 percent over the 2015-2019 period (compared to the 2010-2015 budget period). The Uruguay government coordinated across International Financing Institutions (IFIs) to contribute funding to the NRMP. Second, the scope of the Uruguay Road Corporation (CVU), a public concessionaire managing Uruguay's key highway network, has been expanded, both in size (CVU now manages 2,600 km of highways, up from 1,600 km in 2013) and in its capacity to leverage funds³. Finally, the Government of Uruguay has emphasized private sector participation in road financing and management. MTOP has identified 1,630 km of national roads to be managed under PPP arrangements, where levels of traffic are high enough. The *Ruta 21* and *Ruta 24* PPP bid (approx. 170 km) is currently in the final phase of negotiations.

8. In 2015, UNASEV, Uruguay's national agency for road safety, estimated that 506 people lost their lives in car crashes, with 37.5 percent of these fatalities occurring on the national road network. Unsafe roads generate a significant economic and social burden for Uruguay, which is increasingly taking measures to improve safety standards of its road infrastructure, in line with Pillar 2 of the United Nations Decade of Action for Road Safety.

9. Finally, climate change risks are expected to increase. The sequence of violent climate events that struck the country in recent years (severe storms, tidal waves, floods, high speed winds, etc.) have demonstrated the high vulnerability of critical road infrastructure, as these disasters have led to highly disruptive consequences as regards trade flows and accessibility to basic social services. Such risks need to be addressed, and the resilience of transport systems towards climatic risks requires strengthening.

10. Rationale for the Additional Financing. The Government of Uruguay has requested the World Bank to provide an additional financing of US\$70 million over a 3-year period, to scale up the NRMP, considering the benefits on institutional strengthening, stemming from Bank involvement. Both MEF and the implementing agencies (MTOP, CVU) are supportive of the Program and of the PforR instrument, which they consider a key tool to foster result-based management and improve MTOP's effectiveness in delivering the NRMP.

11. The rationale for the proposed Additional Financing is a scaling-up of Program results, in order to enhance the development impact of a well-performing Program. Improved national road network condition, for better connectivity and reduced logistics costs, as well as strengthened Program implementation systems, would continue to be the Program outcomes, yet be scaled-up with more ambitious targets.

12. Part of the rationale also lies on the road safety and climate-resilient infrastructure agenda included in the Program. As regards road safety, infrastructure interventions are expected to save lives and contribute to reducing Uruguay's car crashes economic and social burden, based on a "safe systems" approach; safe infrastructure systems aims at designing and retrofitting road infrastructure so that road crashes are avoided or their consequences are reduced.

13. In addition, the infrastructure resilience agenda would now be fully integrated within the proposed operation, aiming at strengthening MTOP's capacity to prevent and address ever-stronger adverse climate events and mitigate related economic disruption. Part of the investments

³ From road toll revenues, bond issuance and debt.

financed through road rehabilitation and maintenance (DLI-1 and DLI-2) include improving, upgrading and effectively maintaining road drainage systems, which are a critical element to address climate risks. Performance-based rehabilitation and maintenance contracts, include clear specifications and requirements in this respect. Additionally, DLI-3.2 would strengthen MTOP's institutional capacity to address climate risks.

14. **Consistency with CPF.** The proposed Additional Financing is fully consistent with the World Bank Group's Country Partnership Framework (CPF) for Uruguay for the period 2016-2020. The Framework's third pillar, *Integrating into Global Value Chains*, and specifically Objective 5 under this pillar, *make logistics and transport networks safer and more efficient*, acknowledges the importance of bridging the infrastructure gap and improving the efficiency of transport and logistics systems.⁴ The CPF had already planned for a new PforR operation in the transport sector and one of the CPF indicators is precisely to reduce transport operating costs.

15. **Original Program performance.** The original loan was approved on November 13, 2012 and became effective on April 16, 2013. It was restructured on June 8, 2016 in order to extend the loan closing date and adapt the Program Action Plan. The loan's current closing date is March 31, 2017.

16. PDO and IP ratings over the past 12 months have been consistently rated Moderately Satisfactory or above. The Program has been in compliance with loan legal covenants, including audit and financial management reporting. PDO Indicator 1 (at least 35 percent of the Uruguay National Road Network is in good or very good condition) would be met by the current closing date. PDO Indicator 2 (Percentage of Program Action Plan completed) is at 89 percent (target: 100 percent).

17. As regards DLIs, DLI-1 was fully reached, while DLI-2, on average over the Program implementation period, achieved a 95 percent completion rate. All four DLI-3 results, focusing on Program processes strengthening, have also been achieved.

18. **Alternatives considered.** Additional financing was preferred to other options based on the following: (i) the original Program has delivered good outcomes; (ii) the Government of Uruguay recognizes the results-based approach embedded within the PforR instrument as an effective instrument to finance road maintenance and strengthen Program systems. This proposed Additional Financing to the NRMP complements private sector PPP interventions, as outlined in para. 7.

III. PROPOSED CHANGES

19. **PDO.** The PDO would be modified in the following fashion:

Original Program development objective:

“To sustain at least 35 percent of the Uruguay National Road network in good or very good condition and improve road sector management.”

Revised Program development objective:

“To improve the condition of the Uruguay National Road network and enhance road sector management.”

⁴ CPF discussed by the Executive Directors on December 21, 2015 (Report No. 8604-UY)

20. **Program scope.** Proposed changes would include: (i) extension of the Program implementation end date by three years, until December 31, 2019; and (ii) scaling-up of road safety interventions. This category would include investments that could modify the geometry/functionality of the road infrastructure to address punctual road safety issues. See Annex 7 for full Program definition

21. **Closing dates.** The proposed closing date of the AF loan would be June 30, 2020, which is six months after the proposed Program end date, in order to allow the implementing entities to compute and verify the DLIs. In parallel, the closing date of the original loan, currently March 31, 2017, would be extended to June 30, 2020 (to coincide with the closing date of the AF loan).

22. **Program expenditures.** The updated Program financing table is provided below; the total Program expenditures, over the 2013-2019 period are estimated to be about US\$1,265 million⁵; IBRD financing of the Program costs would be about 11 percent. Other financiers of the Program include: Inter-American Development Bank (IADB), *Fondo Financiero para el Desarrollo de la Cuenca del Plata* (FONPLATA), *Corporación Andina de Fomento* (CAF) and *Fondo para la Convergencia Estructural del MERCOSUR* (FOCEM). While the first two were already co-financing the current Program, CAF and FOCEM would be new co-financiers of the scaled-up Program.

Financing Source (US\$ M)	Original	Additional	Total Program
BORROWER/RECIPIENT	283.5	454.4	737.9
IBRD	66.0	70.0	136.0
OTHER	160.5	231.0	391.5
TOTAL	510.0	755.4	1,265.4

23. **Result Framework and DLIs.** Current Program DLIs focusing on roadworks (DLI#1, DLI#2) would be maintained, both in definition and verification protocols, but with scaled-up targets. These two DLIs would directly contribute to address the climate change risks, through better resilience of the road network, as they include interventions on drainage systems and preventive maintenance on road embankments. A new DLI focusing on road safety results (“Number of km of the National Road Network that benefitted from road safety improvements”) resulting from MTOP’s commitment to improve road safety on the National Road Network and contribute to the overall Uruguay road safety strategy would be added.

24. As regards institutional strengthening, the four DLRs under DLI#3, in the original loan, have been achieved. These DLRs would be replaced by two new DLRs, focusing respectively on: (i) works quality assurance, and (ii) road infrastructure resilience to climatic events. These institutional strengthening actions derive from the incremental Program systems assessments. See Annexes 1 and 2 for further details on the DLIs and their verification protocols.

25. **Program Action Plan.** Proposed PAP activities build on the incremental systems assessments. The PAP 15 activities, fully described in Annex 8, aim at strengthening: (i) roadworks planning and supervision; (ii) road safety audit capacity; (iii) resilience of road networks; (iv)

⁵ NRMP expenditures excluded from the Program are: (i) force account road routine maintenance of the road network, including salaries, operational costs and construction material; (ii) expenditures related to national road network development, typically new road infrastructure and highway duplication.

financial management systems through risk-based audits; (v) procurement procedures; and (vi) environmental and social management.

IV. APPRAISAL SUMMARY

26. Overall, Program implementation arrangements (implementation agencies, technical, fiduciary, safeguards, disbursements, monitoring and verification process) remain the same as in the original loan. Such arrangements have proven to work adequately. CAF and FOCEM, new Program co-financiers, abide by Program technical, safeguards and fiduciary systems.

27. **Technical.** The proposed scaled-up Program and provision of road safety and climate resilience dimensions, makes it even more strategically relevant to Uruguay's development challenges. The Program expenditure framework has been scaled-up and, based on the original loan track record, is expected to be sufficient to meet established results. The incremental technical assessment concluded that the implementing agencies (MTO, CVU) are adequately organized to cope with this increase in size of the Program; over the past years, the implementation agencies budgets burn rates have been good, and they manage to reach the original Program targets. Roadworks cost-effectiveness is deemed reasonably good, even though some slight increases in roadworks costs has been noted; heavier pavement rehabilitation solutions have been implemented to make up for previous delayed maintenance. Program technical systems have improved, in particular through several of the original Program DLIs and PAP activities (standardization of rehabilitation pavement solutions, roadworks supervision manual). Yet, challenges ahead regarding road safety capacity, works planning and supervision, and the resiliency of road networks towards adverse climatic events need to be better addressed. Program strengthening activities are included in the updated PAP (Annex 8) and as DLIs.

28. The economic and social rationale of the Program continues to be strong: including Bank's financing, the Program investments economic rate of return would be 29 percent. Besides, on the basis of information available at Appraisal, the team estimates US\$10.6 million of the project cost (15% of the additional loan amount) to contribute to climate change co-benefits, covered under DLIs 1, 2 and 3 (see Annex 4).

29. **Fiduciary.** Overall, the Program's fiduciary systems are deemed satisfactory, providing reasonable assurance that the Program funds would be used for their intended purposes (see details in Annex 5). From the Financial Management perspective, Program performance has been adequate and Program executing entities demonstrated a good track record in managing the Program funds. No significant accountability issues have been identified during the supervision stage of the original loan. The Program's accounting records were kept up to date, as evidenced by the financial reports prepared by the MTO. The Program audit reports consistently presented unmodified (clean) opinions; yet, these reports were usually presented to the Bank with delays of two to three months. The internal audit function remains weak and would be strengthened through the Program Action Plan.

30. There is no significant change in the Program's procurement arrangements, which have proved to work satisfactorily under the original Program. The main legal text regulating procurement in the country (*Texto Ordenado de Contabilidad y Administración Financiera - TOCAF*) sets publication conditions, procurement methods, bidding documents and specific procurement arrangements, contract administration, controls and audits, access to information and

complaint mechanisms remains valid. There are no contracts identified at or above prevailing OPRC (Operations Procurement Review Committee) thresholds. The main identified weakness in procurement lies in procurement lead time; activities included within the Program Action Plan are expected to improve this outcome.

31. **Environmental and social.** Program environmental and social management systems are deemed satisfactory, as detailed in Annex 6. The Program implementing entities and environmental / social regulations remain overall the same as for the original loan. The environmental and social impacts of the Program would not change substantially because of the inclusion of the new road safety activities within the Program.

32. Program environmental outcome has been overall satisfactory, as the environmental audit reports carried out during Program implementation have not reported any substantial nonconformity related to: air emissions from asphalt plants, lack of permits from the environmental agency for quarries, contamination of water bodies, management of hazardous materials (diesel tanks), noise, among other aspects. The main environmental regulatory instrument for the Program is the DNV Environmental Manual, which is a document well known in the country and by contractors. This Environmental Manual was improved as part of the original loan PAP. The incremental ESSA shows that the Program implementation entities have actually improved environmental management during the original loan implementation; for instance, the environmental unit of DNV has now been converted to an Environmental Department and DNV has systematized environmental audits.

33. As regards to the Program's social management, while some civil works to be financed under the Program may require land acquisition in specific cases, most rehabilitation and maintenance works under the Program would be carried out within the existing right of way and would not require land acquisition. Land acquisition would take place per the provisions of the Expropriation Law, which provides adequate protection to the affected persons. The activities planned under the Program, including those to increase road safety, are not expected to cause physical displacement (relocation). In terms of expropriation and resettlement, the ESSA did not identify significant gaps between the legal framework and the OP9.00 core principles. This analysis is still valid and would apply to the Program as defined in the AF. The incremental ESSA included a rapid assessment of the Program compliance with agreed actions to improve environmental management; the agreed actions were overall complied with, despite some shortcomings that will be addressed through additional actions included in the proposed new PAP.

34. **Publication and Public Consultation.** A draft ESSA incremental evaluation was disclosed on Bank's website on Feb. 2, 2017, and was consulted during a meeting invited by MTOP and the Bank on Feb. 9, 2017. A total of about 25 people participated. The final ESSA, incorporating public consultation's comments, was published on Bank's external website on Feb. 14, 2017 and in-country, on MTOP's website, on Feb. 17, 2017.

V. WORLD BANK GRIEVANCE REDRESS

35. 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 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 (GRS), 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: Revised Results Framework and Monitoring Indicators

Results Areas Supported by PforR	PDO/Outcome Indicators (Key indicators to measure the achievement of each aspect of the PDO statement)	Intermediate Results Indicators (critical processes, outputs or intermediate outcomes indicators needed to achieve each aspect of the PDO)	DLI #	Unit of Meas.	Baseline (2016)	End Target (2019)	Rationale for Changes from Original
Results Area 1	PDO Indicator 1 Percentage of the Uruguay National Road Network in good or very good condition			%	40	55	Indicator reviewed (from Yes/No to %)
		IR Indicator 1.1 (DLI#1) Cumulative number of km rehabilitated on the National Road Network, at a minimum rating of 85, as measured by the IES.	1	km	524	524+890	Indicator remains the same. Target revised consistently with Program scaling-up.
		IR Indicator 1.2 (DLI#2) Number of km of the National Road Network maintained through performance-based contracts.	2	km	3,000	2017: 3,000 2018: 3,000 2019: 3,000	Indicator remains the same.
		IR Indicator 1.3 (DLI#4) Number of km of the National Road Network that benefitted from road safety improvements.	4	km	0	263	New indicator, consistent with Program scaling-up with road safety investment.
Results Area 2	PDO Indicator 2 Percentage of Program Action Plan actions completed (cumulative)			%	0	100	Indicator remains the same.
		IR Indicator 2.1 (DLR#3-1) The multimodal plan for Montevideo seaport land access has been approved.	3	Yes / No	Yes	Yes	DLR fully achieved as part of the original loan.
		IR Indicator 2.2 (DLR#3-2)	3	Yes / No	Yes	Yes	DLR fully achieved as

		The catalogue for technical solutions of pavement rehabilitation has been approved.					part of the original loan.
		IR Indicator 2.3 (DLR#3-3) DNV Environmental Manual has been updated and at least 75% of DNV's technical staff with responsibilities related to works supervision have been trained under terms of reference acceptable to the Bank, including a training on the description of the features of the updated DNV Environmental Manual.	3	Yes / No	Yes	Yes	DLR fully achieved as part of the original loan.
		IR Indicator 2.4 (DLR#3-4) The guidelines for expropriation and social management processes have been approved and an international workshop on best practices for road works social management has been carried out.	3	Yes / No	Yes	Yes	DLR fully achieved as part of the original loan.
		IR Indicator 3.1 a (DLR#3-1 a) MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in calendar year 2017, as reflected in the Program Reports;	3	Yes / No	No	Yes	New DLR
		IR Indicator 3.1 b (DLR#3-1 b) MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in calendar year 2018, as reflected in the Program Reports;	3	Yes / No	No	Yes	New DLR
		IR Indicator 3.1 c (DLR#3-1 c) MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in calendar year 2019, as reflected in the Program Reports;	3	Yes / No	No	Yes	New DLR
		IR Indicator 3.2 a (DLR#3-2 a) A study to assess which areas of the National Road Network are subject to climatic risks has been completed.	3	Yes / No	No	Yes	New DLR
		IR Indicator 3.2 b (DLR#3-2 b) Number of selected bridges have been diagnosed against climatic risks.	3	#	0	20	New DLR
		IR Indicator 3.2 c (DLR#3-2 c) A contingency plan for catastrophic climate related events has been developed.	3	Yes / No	No	Yes	New DLR

Indicator Description

Indicator Name (#)	Description (Clear definition etc.)	Frequency	Data Source	Methodology for data collection	Responsibility for Data Collection	DLIs		Rationale for Change
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)	
PDO-1	Percentage of the Uruguay National Road Network in good or very good condition	Yearly	DNV	Average of the number of km with IRI < x x: = 2.8 asphalt concrete pavement = 3.6 hydr. Concrete pavement = 3.9 surface treatment pavement	DNV	n.a.	n.a.	Target updated to 55 percent, consistent with Program scaling-up.
PDO-2	Percentage of Program Action Plan actions completed (cumulative)	Yearly	DNV	Based on the number of Program Action Plan actions completed.	DNV	n.a.	n.a.	No change in indicator.
IR 1-1 (DLI-1)	Cumulative number of km rehabilitated on the National Road Network, at a minimum rating of 85, as measured by the IES	Yearly	DNV	See DLI verification protocol table.	DNV	Independent auditor contracted out by MTOP.	Yes	No change in indicator.
IR 1-2 (DLI-2)	Number of km of the National Road Network maintained through performance-based contracts.	Yearly	DNV	See DLI verification protocol table.	DNV	Independent auditor contracted out by MTOP.	Yes	No change in indicator.

Indicator Name (#)	Description (Clear definition etc.)	Frequency	Data Source	Methodology for data collection	Responsibility for Data Collection	DLIs		Rationale for Change
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)	
IR 1-3 (DLI-4)	Number of km of the National Road Network that benefitted from road safety improvements.	Yearly	DNV	See DLI verification protocol table.	DNV	Independent auditor contracted out by MTOP.	Yes	New indicator.
IR 2-1 (DLR 3-1)	The multimodal plan for Montevideo seaport land access has been approved.	DLR fully achieved as part of the original loan. No more monitoring needed.						
IR 2-2 (DLR 3-2)	The catalogue for technical solutions of pavement rehabilitation has been approved.	DLR fully achieved as part of the original loan. No more monitoring needed.						
IR 2-3 (DLR 3-3)	DNV Environmental Manual has been updated and at least 75% of DNV's technical staff with responsibilities related to works supervision have been trained under terms of reference acceptable to the Bank, including a training on the description of the features of the updated DNV Environmental Manual.	DLR fully achieved as part of the original loan. No more monitoring needed.						
IR 2-4 (DLR 3-4)	The guidelines for expropriation and social management processes have been approved and an international workshop on best practices for road works social management has been carried out.	DLR fully achieved as part of the original loan. No more monitoring needed.						
IR 2-5 (DLR 3-1 a)	MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in	Yearly	DNV	See DLI verification protocol table.	DNV	MTOP	No	New DLR.

Indicator Name (#)	Description (Clear definition etc.)	Frequency	Data Source	Methodology for data collection	Responsibility for Data Collection	DLIs		Rationale for Change
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)	
	calendar year 2017, as reflected in the Program Reports;							
IR 2-5 (DLR 3-1 b)	MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in calendar year 2018, as reflected in the Program Reports.	Yearly	DNV	See DLI verification protocol table.	DNV	MTOP	No	New DLR.
IR 2-5 (DLR 3-1 c)	MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in calendar year 2019, as reflected in the Program Reports;	Yearly	DNV	See DLI verification protocol table.	DNV	MTOP	No	New DLR.
IR 2-6 a (DLR 3-2 a)	A study to assess which areas of the National Road Network are subject to climatic risks has been completed.	By Program end	DNV	See DLI verification protocol table.	DNV	MTOP	No	New DLR
IR 2-6 b (DLR 3-2 b)	Number of selected bridges have been diagnosed against climatic risks.	By Program end	DNV	See DLI verification protocol table.	DNV	MTOP	Yes	New DLR
IR 2-6 c (DLR 3-2 c)	A contingency plan for catastrophic climate related events has been developed.	By Program end	DNV	See DLI verification protocol table.	DNV	MTOP	No	New DLR

Annex 2: Disbursement Linked Indicators, Disbursement Arrangements and Verification Protocols

Table 1 - Disbursement-Linked Indicator Matrix

	<i>Total World Bank Financing Allocated to DLI (Original WB Financing)</i>	<i>As % of Total Financing Amount (As % of original WB financing)</i>	<i>DLI Baseline (as of 12/2016)</i>	<i>Indicative timeline for DLI achievement</i>			<i>Rationale for Change</i>
				<i>CY 2017</i>	<i>CY 2018</i>	<i>CY 2019</i>	
DLI 1:	Cumulative number of km rehabilitated on the National Road Network, at a minimum rating of 85, as measured by the IES.						Indicator remains the same. New targets for 2019, consistently with Program scaling-up.
Status of Achievement/ Disbursement:	100% achieved (corresponding to 524 km) and disbursed under the original loan.						
Allocated amount:	\$49 million (\$26 million)	36.0% (39.4%)	524 km	824 km	1,124 km	1,414 km	
DLI 2	Number of km of the National Road Network maintained through performance-based contracts.						Indicator remains the same. New targets for 2017, 2018 and 2019, consistently with Program scaling-up.
Status of Achievement/ Disbursement:	DLI fully achieved for the first year of Program implementation (2013: 3,189 km/3,100 km), and partially achieved for 2014 (3,052 km / 3,250 km) and 2015 (3,000 km / 3,300 km). Overall 95% disbursed under the original loan.						
Allocated amount:	\$51 million (\$30 million)	37.5% (45.5%)	3,000 km	3,000 km	3,000 km	3,000 km	
DLI 4	Number of km of the National Road Network that benefitted from road safety improvements.						New indicator, consistent with Program scaling-up with road safety investment.
Status of Achievement/ Disbursement:	New DLI.						
Allocated amount:	\$20 million (\$0 million)	14.7% (0%)	0 km	50 km	150 km	26330 km	
DLI 3: DLR 3-1	The multimodal plan for Montevideo seaport land access has been approved.						No change.

Status of Achievement/ Disbursement:	DLR 100% achieved under the original loan, but disbursement has not been sought yet. No more financing allocated.						
Allocated amount:	\$2.5 m (\$2.5m)	1.8% (3.8%)	Yes	n.a.	n.a.	n.a.	
DLI 3: DLR 3-2	The catalogue for technical solutions of pavement rehabilitation has been approved.						No change.
Status of Achievement/ Disbursement:	DLR 100% achieved under the original loan, but disbursement has not been sought yet. No more financing allocated.						
Allocated amount:	\$2.5 m (\$2.5m)	1.8% (3.8%)	Yes	n.a.	n.a.	n.a.	
DLI 3: DLR 3-3	DNV Environmental Manual has been updated and at least 75% of DNV's technical staff with responsibilities related to works supervision have been trained under terms of reference acceptable to the Bank, including a training on the description of the features of the updated DNV Environmental Manual.						No change.
Status of Achievement/ Disbursement:	DLR 100% achieved and disbursed under the original loan. No more financing allocated.						
Allocated amount:	\$2.5 m (\$2.5m)	1.8% (3.8%)	Yes	n.a.	n.a.	n.a.	
DLI 3: DLR 3-4	The guidelines for expropriation and social management processes have been approved and an international workshop on best practices for road works social management has been carried out.						No change.
Status of Achievement/ Disbursement:	DLR 100% achieved and disbursed under the original loan. No more financing allocated.						
Allocated amount:	\$2.5 m (\$2.5m)	1.8% (3.8%)	Yes	n.a.	n.a.	n.a.	
DLI 3: DLR 3-1 (New)	<p>MTOP's central laboratory for roadworks quality assurance has been improved:</p> <p>DLR#3-1 (a): MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in execution in calendar year 2017, as reflected in the Program Reports;</p> <p>DLR#3-1 (b): MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the works contracts in execution in calendar year 2018, as reflected in the Program Reports;</p>						New indicator.

	DLR#3-1 (c): MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the works contracts in execution in calendar year 2019, as reflected in the Program Reports.						
Status of Achievement/ Disbursement:	Not yet initiated (new indicator).						
Allocated amount:	\$3.0 million (\$0 million)	2.2% (0%)	No	Yes	Yes	Yes	
DLI 3: DLR 3-2 (New)	DLR#3.2: (a) a study to assess which areas of the National Road Network are subject to climatic risks has been completed; DLR #3.2 (b): Number of selected bridges have been diagnosed against climatic risks DLR#3.2 (c) a contingency plan for catastrophic climate related events has been developed.						New indicator.
Status of Achievement/ Disbursement:	Not yet initiated (new indicator).						
Allocated amount:	\$3.0 million (\$0 million)	2.2% (0%)	0	5	10	20	
Total Financing Allocated:	\$136 million (\$66 million)	100% (100%)					

Table 2 - DLI Verification Protocol Table

#	DLI	Definition/ Description of achievement	Scalability of Disbursements (Yes/No)	Protocol to evaluate achievement of the DLI and data/result verification			Rationale for any Changes
				Data source/agency	Verification Entity	Procedure	
1	Cumulative number of km rehabilitated on the National Road Network, at a minimum rating of 85, as measured by the IES.	<p>Each km will be considered rehabilitated if $IES \geq 85$, after works.</p> <p>IES measurement technical protocol will abide by MTOP's <i>Instructivo de Medicion del Indice de Estado de Superficie</i> (August 2000). Surveys will be carried out on all the road sections before and after rehabilitation.</p> <p>For prior results, IES before rehabilitation will stem from data available at DNV.</p> <p>To be eligible for this indicator, each km must: (i) have been rehabilitated on or after 01/01/2017; and (ii) have an IES ex-post value of, at least, 85.</p>	Yes	Road department (DNV)	Independent auditor contracted out by MTOP.	A report prepared DNV, and audited by the independent auditor, will provide ground for the related disbursement. The report will include in particular: (i) for each unit section of the National Road Network under the Program, the IES before (the IES before being either verified by specific Auditor check or by data regarding the road network condition made available on MTOP's website) and after the works; (ii) all proceedings of IES survey and computation.	Existing DLI. No change.
2	Number of km of the National Road Network maintained through performance-based contracts.	<p>Eligible kilometers are included in road rehabilitation / maintenance performance-based contracts (PBCs), which are contracts under the Program, whereby the payment, or part of the payment, to the private contractor depends on road infrastructure level of service determined in the contract. Maintenance will include at least pavement and drainage.</p> <p>For each evaluation period, the DLI value is the sum of km included in National Road Network PBCs, the km under a specific contract being weighed by the number of days this contract has been effective over the evaluation period (365 days):</p> $DLI2 = \sum_{i:PBCs} km_i \times \frac{d_i}{365}$ <p>Where:</p>	Yes	Road department (DNV)	Independent auditor contracted out by MTOP.	Evidence for the compliance of this DLI will stem from DNV's contract management system. To support the disbursement related to this DLI, DNV will have to issue a report including: (i) the list of eligible contracts with their main characteristics, including km extension; (ii) orders or acts of initiation; (iii) certifications or service orders for the assessed period; (iv) the act of reception, if relevant.	Existing DLI. No change.

		<ul style="list-style-type: none"> • km_i: number of km included in PBC <i>i</i> • d_i: number of days PBC <i>i</i> has been effective over the evaluation period 				This report will be audited by the independent auditor.	
4	Number of km of the National Road Network that benefitted from road safety improvements.	<p>Each km of the national road network will be considered eligible if any of the following interventions has been carried out:</p> <ul style="list-style-type: none"> - Setting up of devices to reduce speed; - Setting up of lateral flexible guardrails; - Setting up signaling in dangerous curves; - Setting up rumble-strip warning on road shoulder / edge line - Setting up fence or similar protection equipment to protect and prevent non motorize traffic flows - Road shoulder widening; - Improvement of road sight distance visibility; - Horizontal and vertical signaling. <p>DLI 4 will be the sum of the number of km that will have benefitted of any of the interventions above. One km can be counted only once, even if benefiting from several types of interventions.</p>	Yes	Road department (DNV)	Independent auditor contracted out by MTOP.	<p>Evidence for the compliance of this indicator will be based on a comparison before / after of video-recordings the km proposed for disbursement. The video-recordings will be georeferenced to ensure the accuracy of km.</p> <p>Reports will be audited by the independent auditor.</p> <p>-</p>	New DLI.
3	Strengthening of MTOP's capacity for road sector management						
	DLR 3-1	DLR fully achieved as part of the original loan. No more verification required.					
	DLR 3-2	DLR fully achieved as part of the original loan. No more verification required.					
	DLR 3-3	DLR fully achieved as part of the original loan. No more verification required.					
	DLR 3-4	DLR fully achieved as part of the original loan. No more verification required.					
	DLR 3-1 (New)	DLR#3-1 (a): MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the work contracts in	No	MTOP	MTOP	MTOP will prepare a memo certifying that the result is achieved. The memo will include the relevant	New DLR

	<p>execution in calendar year 2017, as reflected in the Program Reports;</p> <p>DLR#3-1 (b): MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the works contracts in execution in calendar year 2018, as reflected in the Program Reports;</p> <p>DLR#3-1 (c): MTOP's central laboratory for roadworks quality assurance has carried out at least 5% of the asphalt, pavement and soil tests required by the works contracts in execution in calendar year 2019, as reflected in the Program Reports.</p>				documentation for the Bank verification.	
DLR 3-2 (New)	<p>DLR#3.2: (a) a study to assess which areas of the National Road Network are subject to climatic risks has been completed;</p> <p>DLR #3.2 (b): Number of selected bridges have been diagnosed against climatic risks</p> <p>DLR#3.2 (c) a contingency plan for catastrophic climate related events has been developed.</p>	No	MTOP	MTOP	MTOP will prepare a memo certifying that the result is achieved. The memo will include the relevant documentation for the Bank verification.	New DLR

Table 3 - Bank Disbursement Table

#	DLI	Bank financing allocated to the DLI	Of which Financing available for Prior results	Deadline for DLI Achievement ¹	Minimum DLI value to be achieved to trigger disbursements of Bank Financing	Maximum DLI value(s) expected to be achieved for Bank disbursements purposes	Determination of Financing Amount to be disbursed against achieved and verified DLI value(s)	Original or AF
1	Cumulative number of km rehabilitated on the National Road Network, at a minimum rating of 85, as measured by the IES.	\$23 m	-	12/31/2019	Within two successive disbursement requests, there must be a minimum of 50 additional kilometers rehabilitated.	524+890 km by the end of the Program.	<p>For the first evaluation period: $d_1 = (km_1 - 524) \times u$</p> <p>For each subsequent evaluation period i: <ul style="list-style-type: none"> If $km_i - km_{i-1} \geq 50$: $d_i = (km_i - km_{i-1}) \times u$ If $km_i - km_{i-1} < 50$: $d_i = 0$ If $km_i > 1414$: $d_i = (1414 - km_{i-1}) \times u$ </p> <p>Where: di: actual disbursement for period i u = US\$25,843 km_i: actual value reached by the indicator for period i</p>	Original, with updated final target

2	Number of km of the National Road Network maintained through performance-based contracts.	\$21 m	-	For each year: 12/31/2017 12/31/2018 12/31/2019	Each year, at least 50% of the Annual target indicators must have been achieved	Annual target indicators : T ₁ =3,000 T ₂ =3,000 T ₃ =3,000	For each period of evaluation i: $di = \min\left\{\frac{ti}{Ti} \times D, D\right\}$ Where: di: actual disbursement for period i D: US\$7,000,000 ti: actual value reached by the indicator for period i Ti: target indicator value for period i.	Original, with updated targets for 2017, 2018 and 2019
4	Number of km of the National Road Network that benefitted from road safety improvements.	\$20 m	-	12/31/2019	None	263 km by the end of the Program.	For the first evaluation period: $d_1 = km_1 \times u$ For each subsequent evaluation period i: <ul style="list-style-type: none"> • If $km_i \leq 263$: $d_i = (km_i - km_{i-1}) \times u$ • If $km_i > 263$: $d_i = (263 - km_{i-1}) \times u$ Where: d: actual disbursement for period i u = US\$76,000 km: actual value reached by the indicator for period i	New

3	Strengthening of MTOP's capacity for road sector management							
	DLR 3-1	\$2.5m	DLR fully achieved as part of the original loan. No more disbursement expected.					
	DLR 3-2	\$2.5m	DLR fully achieved as part of the original loan. No more disbursement expected.					
	DLR 3-3	\$2.5m	DLR fully achieved as part of the original loan. No more disbursement expected.					
	DLR 3-4	\$2.5m	DLR fully achieved as part of the original loan. No more disbursement expected.					
	DLR 3-1 (New)	\$3.0m	-	DLR 3-1 (a): 12/31/2017 DLR 3-1 (b): 12/31/2018 DLR 3-1 (c): 12/31/2019	n.a.	n.a.	Upon achievement verified by the Bank: DLR 3-1 (a): US\$ 1 million DLR 3-1 (b): US\$ 1 million DLR 3-1 (c): US\$ 1 million	New
	DLR 3-2 (New)	\$3.0m	-	DLR 3-2 (a): 12/31/2019 DLR 3-2 (b): 12/31/201 DLR 3-2 (c): 12/31/2019	n.a.	n.a.	Upon achievement verified by the Bank: DLR 3-2 (a): US\$ 1 million DLR 3-2 (b): US\$ 1 million DLR 3-2 (c): US\$ 1 million	New

Annex 3: Integrated Risk Assessment

Systematic Operations Risk-Rating Tool (SORT)		
Risk Category	Original Rating (H, S, M, L)	Revised Rating (H, S, M, L)
1. Political and Governance	L	L
2. Macroeconomic	L	L
3. Sector Strategies and Policies	Was not included in the original SORT	L
4. Technical Design of Project or Program	M	M
5. Institutional Capacity for Implementation and Sustainability	Was not included in the original SORT	M
6. Fiduciary	M	M
7. Environment and Social	M	M
8. Stakeholders	L	L
9. Other	M	Risks now covered under Risk #5 above
OVERALL	M	M

At appraisal of the original loan, the SORT matrix template did not include “Sector Strategies and Policies” and “Institutional Capacity for Implementation and Sustainability”; as a result, these risks were not assessed.

The *Sector Strategies and Policies* risk is rated Low. Since the beginning of its tenure, the Uruguay government has claimed a strong commitment to the infrastructure and logistics agenda, supported by increasing public budget, on the road sector in particular. The continued efforts from MEF and MTOP on road concessions also shows the importance of the transport agenda for Uruguay.

The *Technical Design of Project or Program* risk is maintained as Moderate. While the on-going Program has shown a good implementation record, the new road safety dimension adds an incremental risk, with a new DLI.

The *Institutional Capacity for Implementation and Sustainability* is rated Moderate, as regards the proposed Additional Financing. This risk, covered at appraisal under the “Other risks” category, was rated at that time Moderate. This risk is maintained Moderate.

The *Environmental and social* risk is maintained as Moderate. While the on-going Program has shown a good implementation record in terms of Safeguards, the new road safety investments environmental and social adverse impacts are expected to be low.

The *Stakeholder* risk is maintained as Low. Additional support from stakeholders is expected, resulting from the new road safety dimension.

There are no *other risks* contemplated.

As a result, the overall risk for this proposed Program remains Moderate.

Annex 4: Technical Assessment – Addendum

1 PROGRAM DESCRIPTION

1.1 URUGUAY’S NATIONAL ROAD MAINTENANCE PROGRAM

1. The Uruguay National Road Maintenance Program (NRMP) is based on the Uruguay 2015-2019 Budget Law; this five-year budget law has almost the same structure as the 2010-2014 one.⁶ The Budget Law is structured along 18 “programmatically areas”; two programmatic areas: (i) Programmatic Areas 9, “Infrastructure, Transport and Communications” and 14, “Public Safety”, are of special interest for the proposed additional financing.

2. Within these two programmatic areas, the Uruguay road program is comprised of five “projects” (*Proyectos*): Proyecto 750, Roads, Proyecto 752, Bridges, Proyecto 855, Maintenance, Proyecto 908, Technical assistance, and Proyecto 754, Road safety. The scopes of these *Proyectos* have not changed and are fully described in the original Program Technical assessment.

3. Table 1 presents the NRMP’s planned expenditure framework, based on the 2015-2019 budget law credits (*creditos*) and CVU’s investment budget for road rehabilitation and maintenance.

Table 1 – Uruguay NRMP planned expenditure framework (US\$ Million Equivalent)

<i>Expenditures Type</i>	2015	2016	2017	2018	2019	TOTAL
<i>MTOP - Proyecto 750</i> Roads	50,2	65,8	35,1	33,2	6,9	191,2
<i>MTOP - Proyecto 752</i> Bridges	14,4	2	-	-	-	16,4
<i>MTOP - Proyecto 855</i> Maintenance	75,8	99,1	132,5	131,6	157,1	596,1
<i>MTOP - Proyecto 908</i> Technical assistance	1,3	2,4	2,4	2,4	2,4	10,9
<i>MTOP - Proyecto 754</i> Road safety	4,1	5,2	4,5	7,3	8,1	29,2
<i>CVU</i> Road rehabilitation	0,0	75,2	75,2	104,8	163,4	418,5
Total NRMP	145,8	249,7	249,7	279,3	337,9	1.262,3

4. Over CY15-19, the Uruguay road investment and maintenance NRMP planned expenditures are expected to be about US\$1,260 million equivalent.

1.2 THE PROGRAM

5. The proposed Program is part of the above-outlined NRMP. The detailed description of the modified Program is provided in Annex 7. The Program would continue focusing on the Uruguay

⁶ The only change, vis-à-vis the previous Budget Law is the inclusion of a new programmatic area: PA 18, Energy.

national road network rehabilitation and maintenance, but the proposed Program would now span until 12/31/2019, adding three years to the initial Program.

6. Activities would include: road rehabilitation and maintenance, bridge rehabilitation and reconstruction, road safety works and provision of technical assistance. The typology of activities remains basically the same as the ones of the original Program, with the addition of road safety works. Road safety works, which consists of, *inter alia*: (i) investments to improve visibility; (ii) investments to reduce road crashes severity; and (iii) road equipment investments.

7. As in the original Program, Program investments would be located throughout the Uruguay national territory and would not include activities on international bridges. The Program would not include duplication of existing roads, creation of new road sections (greenfield, including village/city by-passes) or any high-risk investment from an environmental / social safeguards perspective. The Program would not include high-value contracts; the maximum contract amount under the original Program was about US\$15 million equivalent, well below the current OPRC thresholds.

1.3 PROGRAM EXPENDITURE FRAMEWORK

8. Table 2 below shows the planned expenditures of the Program, for Calendar Years 2017 to 2019, based on anticipated available spending limits (topes) and works contracting / progress.

Table 2 – Program Expenditure Framework (US\$ Million)

<i>Expenditure Types</i>	CY2017	CY2018	CY2019	TOTAL
Rehabilitation	127.7	133.4	172.6	433.7
Bridges	15.4	13.6	19.7	48.7
Maintenance	77.4	65.6	83.7	226.7
Institutional strengthening	3.6	2.8	2.8	9.2
Road safety	12.1	11.0	14.0	37.2
TOTAL	236.2	226.4	292.8	755.4

9. The total estimated cost of the Program is about US\$755.4 million equivalent, over the 2017-2019 period. The Program would be financed by Government fiscal resources, as well as IADB, FONPLATA, CAF, FOCEM and IBRD loans. Table 3 next page shows their respective contribution to the Program expenditures.

Table 3 – Program Financing 2017-2019

Source	Amount (US\$ M)	% of Total
Government	454.4	60%
IBRD	70.0	9%
IADB	81.2	11%
FONPLATA	31.0	4%
CAF	90.6	12%
FOCEM	28.2	4%
Total	755.4	100%

2 PROGRAM STRATEGIC RELEVANCE AND TECHNICAL SOUNDNESS

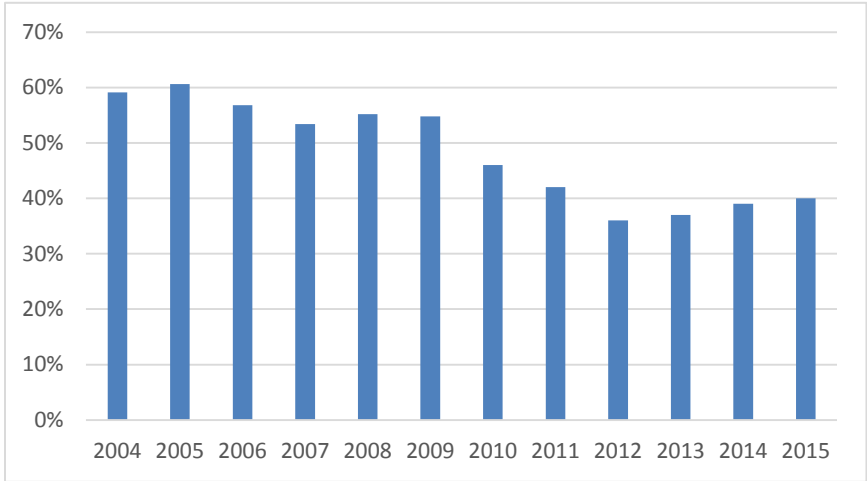
2.1 STRATEGIC RELEVANCE

10. The Program continues to show critical strategic relevance for the country’s economy, as detailed in the original technical assessment. The quality of road infrastructure is a key enabler of logistics services as almost all logistics chains in Uruguay involve a road transport link. As an example, a recent study showed that almost 60 percent of costs in soybean logistics derive from road transport. These costs are high when compared to best international benchmarks: US¢33/ton-km in Uruguay compared to US¢15/ton-km in the US, on comparable road-based logistics chains.⁷

11. While the overall condition of the national road network has improved over the past four years, its global condition remains sub-optimal and continues generating high transportation and logistics costs. Chart 1 shows the overall evolution of the Uruguay road network condition, highlighting a clear improvement over the past three years, corresponding to the original Program dates.

⁷ Soybean Logistics: Argentina – Paraguay – Uruguay, World Bank, 2016. Available at: <http://documents.worldbank.org/curated/en/923401468272770160/Logistica-de-la-soja-Argentina-Paraguay-Uruguay>

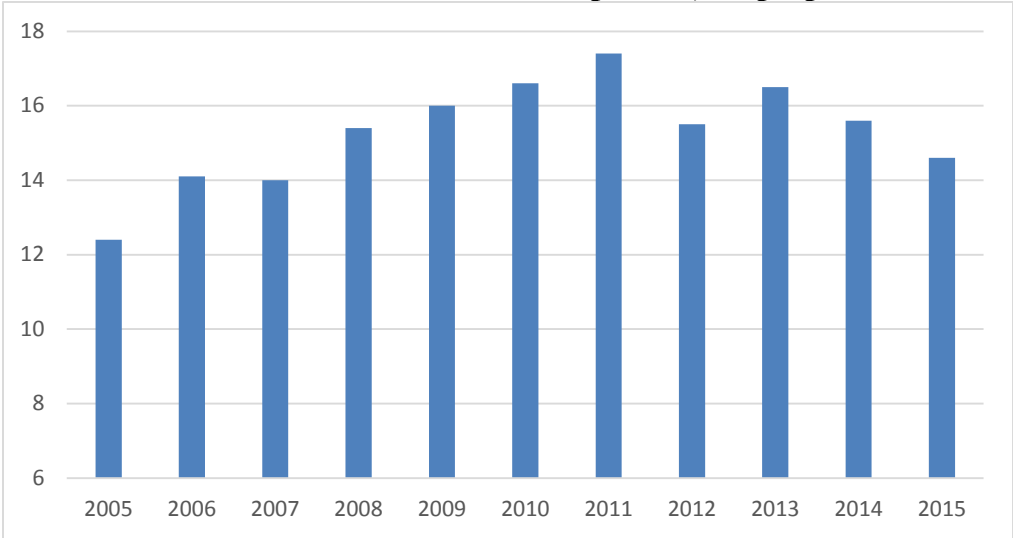
Chart 1 – Percentage of the Uruguay national road network in good or very good condition



12. Yet, despite this substantial improvement, about 60 percent of the national network remains in regular or bad condition. Part of the national road network is in suboptimal condition, and although these are lower traffic corridors (category II and III national roads), they are critical for logistics activities.

13. In the original technical assessment, road safety did not appear as a major concern with MTOP, although largely supported by the national road safety agency (UNASEV – *Unidad Nacional de Seguridad Vial*, reporting to the presidency). Now, road safety awareness has emerged within MTOP. In 2015, UNASEV estimated that 506 people lost their lives in car crashes, although only 37.5 percent of overall car crashes fatalities occur on national roads. While the trend since 2005 is globally improving, unsafe road generate a significant economic and social burden for Uruguay, striking disproportionately younger and poorer people; about 27 percent of fatalities are people between 20 and 24-year old.

Chart 2 – Number of fatalities per 100,000 people



14. Finally, climate change risks are expected to have an increasing impact on the country, in particular its transport networks. From 2014 to 2016, several violent climate events struck the country. In affected areas, the road infrastructure was severely damaged, highlighting a need to improve road climate resilience. This critical climate change adaptation dimension is fully included in the Program, both in works (DLI#1 and 2) and institutional strengthening (DLI#3, Program Action Plan).

2.2 TECHNICAL SOUNDNESS

15. The original Program outcomes have confirmed that the Program is technically sound; Program activities are focused on Program goals, technical standards are good, and stakeholders interests are aligned. The Program's additional focus on road safety would require scaled-up prioritization, and funding, to specific road investments. While the expenditure framework leaves room for road safety investments, the Road department would have to put in place specific procedures for the specific road safety investments to happen, lest they become "forgotten" among mainstream road rehabilitation priority. The DLI incentive is expected to mitigate this risk.

16. Over the original Program implementation, stakeholders have overall strongly supported Program implementation and outcome. On the institutional side, the logistics agenda, road infrastructure in particular, has been one of the major campaign platform elements of the 2015 general elections. From the road end-users perspective, countless media clips and articles have been issued, advocating for an improved road system.⁸ From the road neighbors' perspective, who could be adversely impacted by the roadworks, the original Program implementation showed that such impact has been minimal – see the Incremental Environmental and Social Systems Assessment, Annex 6, for further details.

17. As discussed in the original Program technical assessment, road maintenance sustainability is always an issue: it is expensive and could be easily postponed, without too many consequences on the short term, but much higher costs on the medium one, in case of reducing fiscal resources / budget allocations. Yet, Uruguay recently took several steps to increase Program sustainability. First, budget allocations for the road sector have increased – see Section 4 for further details. Second, as discussed above, Uruguay has expanded the scope of CVU. CVU now manages about 2,600 km of national roads, which brings further sustainability to the road sector. Indeed, CVU is able to raise funds and is, overall, more agile than MTOP. Third, Uruguay has continued expanding its PPP program in the road sector, aiming at increasing the net revenues dedicated to the sector and, on the other hand, providing further effectiveness to the road sector management. In December 2016, the PPP contract of the first set of roads (Ruta 21 and 24, 170 km) is reaching financial closing, while a second set of roads, covering 744 km, is in bidding phase.

18. Thanks to its strategic relevance and technical soundness, FOCEM and CAF would now support the Program, in addition to the IADB and FONPLATA, already supporting the original Program. This shows a large consensus among international financing institutions.

⁸ See, e.g., this article from *El Observador*, dated May 15, 2016: <http://www.elobservador.com.uy/rutas-estado-emergencia-n910765>

2.3 PROGRAM PAST PERFORMANCE

19. Based on the past four years of implementation, Program performance has been good and reasonably cost-efficient.

20. **Original Program performance.** The original Program performance was good, as the first DLI was fully met (524 km rehabilitated, achieving the required quality standards) and the second DLI was, on a 2013-2015 average, 95% met. Subsequently, as shown in Chart 1 above, the overall quality of the national road network has significantly improved over the past three years.

21. **Cost-efficiency.** Based on track-record, the Program is assessed to be reasonably cost-efficient, considering the situation of the construction market in Uruguay. On average, the cost to rehabilitate one km of national road is about half a million dollar, while the yearly annual cost of routine maintenance is approx. US\$7,000; it is noteworthy that there is significant variability in these numbers, depending on the rehabilitation technique, and the level of routine maintenance. These costs appear to be rather high compared to regional benchmarks (Southern Brazil), chiefly stemming from the rather small size the Uruguay construction market. Promoting performance-based rehabilitation and maintenance is expected, under the Program, to improve such cost-efficiency.

22. **Fiduciary.** From the Financial Management perspective, Program performance was adequate. The program executing entities demonstrated a good track record in managing the program funds. No major accountability issues were identified during the supervision stage of the first phase. The program's accounting records were kept up to date as evidenced by the financial reports prepared by the MTOP. Moreover, the information contained in these reports was reliable as shown by the program's external audit reports which consistently presented unmodified (clean) opinions. However, these reports were usually presented to the Bank with delays of two to three months.

23. The internal audit function was highlighted in the Financial Management Assessment as one of the major areas of fiduciary risk. This was because the MTOP's internal audit unit focused mainly on performing compliance reviews of policies and procedures which hinders the identification and mitigation of the major risks. Thus, the improvement of the internal audit unit capacity was considered as part of the program action plan (PAP) through the implementation of a Risk Based Audit (RBA) approach as recommended by international practices. Although this PAP was mostly completed, some challenges remain at the internal audit function of the MTOP, mainly due to the fact that the implementation of the RBA is still in an early stage with the first audit using this approach to be conducted on 2017.

24. **Institutional arrangements.** The institutional arrangements for Program implementation are the same as for the original loan. The Program would be primarily implemented by the Ministry of Transport and Public Works (MTOP) and the Uruguay Road Corporation (*Corporación Vial del Uruguay* – CVU). The institutional arrangements are fully described in the original Program technical assessment, and, overall, its conclusions remain valid.⁹ All Program co-financiers (IADB, FONPLATA, CAF and FOCEM) use the same Program technical systems described below.

⁹ Available at: <http://documents.worldbank.org/curated/en/554151468319162244/pdf/NonAsciiFileName0.pdf>

25. **CVU's expansion.** Created in 2002, CVU is a State-owned entity which acts as public road concessionaire for part of the national road network; it is one of the program implementing agency, as described in the original Program technical assessment. Yet, in October 2015, CVU's concession contract was modified in order to expand its network. From initially about 1,600 km, CVU now manages almost all of Uruguay's primary national road network, covering about 2,600 km.¹⁰ This is deemed to be a positive move forward in terms of overall network management.

2.4 TECHNICAL SYSTEMS ASSESSMENT UPDATE

26. **Planning.** The planning function continues to work reasonably well; in 2015, the Planning department prepared the 2015-2019 Road works plan (*Plano de obras*), base of the Program. This Department benefited from the original Program Action Plan, insofar as the Pavement Management System, managed by the Planning department, has been fully synced with catalogue of standardized rehabilitation solutions, one of the Program Action Plan results.

27. **Design.** The conclusions of the original assessment of the design function remain largely valid. The Design Department has a good skill mix with experienced engineers but continues to suffer from a shortage of technical staff to carry out its duties in a timely fashion. Yet, this area has been strengthened by introducing a catalogue of standardized solutions, which has alleviated somewhat staff's workload in that area, improving the efficiency of the design process. The cost-efficiency of engineering designs has also been improved through the introduction of recycling pavement techniques.

28. **Execution.** Original Program implementation confirmed that the final quality of road rehabilitation, carried out by DNV and CVU, is good. Performance regarding routine maintenance is subject to higher variability, depending on regions and contractors. Performance-based routine maintenance definitely shows better results, even if "hybrid contracts" often come with cost overruns. Private sector capacity has developed, including investments in line with Program scaling-up. Notable facts include the progressive development in pavement recycling techniques, as well as increased workforce. That way, the construction sector – mostly national, still few international companies – has managed to cope with the substantial increase in roadworks demand, over the past years.

29. **Supervision.** Works supervision processes remain globally sound and undertaken in a professional manner. This area has been strengthened by the implementation of the roadworks supervision Manual, one of the original Program DLIs. This Manual aims at standardizing supervision best practices across regions and teams, both for MTOP and CVU works. The main area for improvement as regards supervision regards quality control; MTOP's central laboratory (*Laboratorio central*) is not effective and requires strengthening. Quality control tests, as required by technical specifications, are routinely carried out by contractors, but not adequately double-checked by supervision teams. Strengthening quality control and MTOP's laboratory is one of the proposed actions for the PAP, also included as a DLI.

¹⁰ See <https://www.cvu.com.uy/#/red-concesionada-corporacion-vial-uruguay>

2.5 FRAUD AND CORRUPTION

30. Overall fraud and corruption mitigation and monitoring procedures described in the original technical assessment remain valid, with strong systems to prevent and address fraud and corruption allegations. Several agencies and laws encompass the institutional setting to address any potential risk or allegation of fraud and corruption. Agencies that could support the MTOP and CVU in preventing, identifying and/or investigating allegations of fraud and corruption include the: (i) Anticorruption Commission (*Junta de Etica and Transparencia*); (ii) Court of Accounts (*Tribunal de Cuentas*); (iii) Administrative Courts (*Tribunal Contencioso Administrativo*); (iv) State Attorneys' Office (*Fiscalia* or *Ministerio Publico*); (v) Judiciary (*Poder Judicial*); (vi) Agency for Access to Information and E-Government (AGESIC); and (vii) Comptroller General's Office (*Contaduria General de la Nación*). This system of laws and agencies offers a reasonable assurance that fraud and corruption risks can be addressed effectively in Uruguay.

31. Within MTOP, based on information provided, no fraud and corruption allegation has been raised over the implementation of the Program. As part of the original Program PAP actions 8 and 9, MTOP has strengthened its civil society engagement, including on reporting possible cases of fraud and corruption through the Citizens Attention Center (*Centro de Atención Ciudadano – CAC*).

3 PROGRAM RESULT FRAMEWORK, MONITORING AND EVALUATION (M&E)

3.1 DEFINITION OF THE PROGRAM RESULT INDICATORS AND DLIs.

32. The Program result indicators and DLIs are provided in Annexes 1 and 2.

3.2 CAPACITY FOR MONITORING AND REPORTING

33. Overall, the existing M&E systems in place in DNV and CVU, as detailed in the original Technical Assessment, continue to be able to provide a satisfactory monitoring of Program activities and results. Reporting against the Budget law results is undertaken on a yearly basis, throughout the Budget Execution Annual Report (*Rendición de cuentas*).

34. Yet, full-fledged and detailed contract monitoring, in terms of physical and financial progress has proved to be challenging. The information is available in several different units and systems; reconciling all the required data to get a full picture of Program progress needed to be carried out manually. Improving the contract management and reporting systems has been identified as one key area for further program effectiveness; this area is proposed within the PAP and as a DLI.

3.3 ROAD INFRASTRUCTURE AND ROAD USAGE

35. During Program implementation, road infrastructure condition and usage monitoring has been more challenging than expected. While visual surface course (*Indice de Estado de Superficie – IES*) has indeed been regularly monitored, pavement roughness (IRI) was only monitored in

2015. IRI regular monitoring over the national road network should be fully part of the Program routine, as proposed by one of the PAP activities.

3.4 CIVIL SOCIETY OVERSIGHT

36. Civil society oversight of public administration is engrained in the country's culture. The road Program is no exception, especially considering the high demands (and expectations) from the civil society to improve road condition. The specific inclusion of a road safety dimension to the Program would further increase this civil society oversight.

3.5 ECONOMIC EVALUATION

37. MTOP carries out ex-ante project economic appraisal as part of the five-year road investment plan (*Plano de obras*); the investment plan, based on socioeconomic priorities, is reevaluated year calendar year, depending on budget availability. This is a satisfactory practice.

4 PROGRAM ECONOMIC EVALUATION

4.1 RATIONALE FOR PUBLIC PROVISION AND BANK ADDED VALUE

38. The rationale for public provision remains the same as in the original Program: in the largest part of the network, the level of traffic is too low to generate enough revenues for private operation. Even the proposed PPP road management contracts, currently in bidding phases, would be primarily funded by public resources (availability payments, not tolls).

39. The added value of World Bank support on the Program is small in terms of financial contribution (about 10 percent of the proposed Program total costs), but important in supporting (i) the result-based approach set out in Uruguay's budget law; and (ii) critical Program strengthening activities for increased sustainability. The Program Action Plan details the areas of focus.

4.2 PROGRAM'S ECONOMIC IMPACT AND CLIMATE CHANGE BENEFITS

40. **Methodology.** The methodology implemented to compute the Program economic impact is based on HDM, which simulates road life cycle and vehicle operation conditions and costs for multiple road design and maintenance alternatives. The economic appraisal is based on the MTOP's five-year road investment plan (see 5.5). This is the same as methodology as for the original Program, yet: (i) simulations parameters (traffic, pavement condition, unit costs, etc.) have been adapted; (ii) the catalogue of standardized rehabilitation solutions (one of the original Program DLIs) has been introduced into HDM and (iii) road safety gains have been added to the types of benefits considered in the original Program economic appraisal (vehicle operation cost reduction, travel time reduction and road agency costs).

41. The Program economic appraisal includes the comparison of three scenarios: (i) Reference scenario, in which rehabilitation works would be postponed as much as possible, only routine

maintenance being undertaken while road condition reaches some critical thresholds. (ii) Program scenario without Bank financing, including all the rehabilitation works scheduled in the *Plan de obras*, established when the 5-year Budget law was prepared, up to an investment of about US\$685 million over the 2017-19 period ; (iii) Program scenario with Bank financing, including a total investment of US\$755.4 million, and the efficiency gains.

42. **Results.** The results of the Program economic appraisal are presented in Table 4.

Table 4 – Program socio-economic appraisal results

Program without Bank financing		Program with Bank financing	
Net Present Value ¹¹	Internal Rate of Return	Net Present Value	Internal Rate of Return
US\$ 563 million	27%	US\$ 681 million	29%

43. The substantial Net Present Value difference between the “with Bank financing” and “without bank financing” scenario results mainly from incorporating road safety benefits to the investment. The rather modest increase in IRR results from the fact that the Bank financing would be a modest contribution to the overall Program expenditures.

44. Computed independently from the remainder of the Program investments, the NPV and IRR of the IBRD proposed additional financing (US\$70 million) would respectively be US\$118 million and 33%. This slighter higher IRR (compared to those of the Program as a whole) is driven by the road safety investments, which have much higher benefits/costs ratios than road rehabilitation investments.

45. **Climate-change adaptation impacts.** Several Program activities will contribute to improve the climate-resilience of road networks. DLI#1 (road rehabilitation) and 2 (road routine maintenance) cover roadworks that would (i) improve drainage systems, making the infrastructure more resilient to heavy rainfalls and floods; and (ii) include preventive embankment strengthening and maintenance. Based on ratios resulting from the original Program, it is estimated that 10% of rehabilitation interventions (DLI#1) and 25% of routine maintenance interventions focus on better climate resilience. In addition, DLI3.2 (with a \$3 million allocation) exclusively focuses on the adaptation institutional strengthening. Overall, climate-change adaptation impact would represent 15% of the proposed Additional Financing amount.

5 INPUTS TO PROGRAM ACTION PLAN

46. Inputs to the Program Action Plan (PAP) include the proposed following activities, broken down by main Program technical areas. These suggested actions have been prioritized and critical ones were inserted in the Program Action Plan or the Result Framework, as DLIs.

¹¹ With 10% discount rate, which MTOP used in the NRMP economic appraisal. This discount rate is on the conservative side, as regards the principles set out in the OPSPQ’s guidance note on discount rates, dated May 9 2016 – which recommends to use a discount rate at twice the country long-term growth prospect. In Uruguay, IMF-projected GDP yearly growth is expected to be 2.5% on average over 2015-2021, which would yield to a 5% discount rate.

47. **Program funding and sustainability.** Several PAP activities have been completed under the original loan (Recategorize the Uruguay national road network, aiming at adapting the network to future transport needs and resources (PAP #1), support long term planning with multimodal planning and transport modeling (PAP #2, DLI-3). No further action is deemed necessary.

48. **Program delivery quality.** Here too, some aspects have improved as regards Program delivery quality; the catalogue of standardized pavement rehabilitation solutions, the roadworks supervision manual have contributed to Program systems strengthening. Inputs to the Program Action Plan to improve the Program delivery quality include:

➤ Planning

- Carry out regular pavement condition, traffic and axle load surveys for more closely monitoring of road condition and usage, aiming at better planning;
- Integrate systematically road safety outcomes within ex-ante investment economic appraisal, in particular as part of the five-year Road investment plan (*Plano de obras*).
- Carry out a mapping and action plan (including investments) for the Uruguay national road network highlighting disaster-prone areas and sections.

➤ Design

- Carry out road safety training to DNV staff on road safety, at various stages (design, retrofitting infrastructure, road safety audits and inspections, roadworks-related road safety);
- Optimize and standardize technical solutions for road junctions prone to traffic accidents;
- Initiate a review of road designs technical standards to better factor in road safety and climate resiliency concerns.

➤ Supervision

- Improve MTOP's central laboratory efficiency, in order to increase in-house roadworks quality compliance verification;
- Carry out a 3-year "taking stock of" exercise of the works supervision Manual and upgrade it accordingly;
- Train technical assistants carrying out supervision tasks.

49. **Program transversal functions.** While some Program aspects have improved (in particular Program accountability and communication with the civil society, as per PAP activities 8 and 9 under the original Program), other aspects were listed and would still need strengthening:

- Support DNV to improve streamlined contract management reporting, through upgraded and interconnected contract management IT system.

6 TECHNICAL RISK RATING

50. The Program technical risk rating remains Moderate, as in the original Program. While two risks identified in the original Program have not materialized, a third one has remained and two new ones, linked to road safety and road infrastructure resilience, have emerged.

51. The main two risks identified under the original Program were the Program funding and delivery quality risks. These two risks have not materialized; on the contrary, additional funds were allocated to the Program. The five-year budget law, providing a strong priority to Uruguay's road program, make the Program funding risk unlikely. Likewise, roadworks executed within the original Program proved to reach the required standards for DLI achievement.

52. Yet, the Program transversal functions risks, linked to human and material resources issues, remains. The road department's staff and resources remain weak considering the large work-program ahead. For instance, the procurement function continues to be fragile; IT systems are still outdated and poorly interconnected. Some PAP activities would contribute to mitigate these risks and strengthen Program systems.

53. Finally, the new road safety dimension of the Program triggers potential new risks: MTOP's staff is, overall, not familiar with road safety concepts, beyond illumination and road signaling. Here too, these risks would be mitigated through specific PAP activities.

7 INPUTS TO THE PROGRAM IMPLEMENTATION SUPPORT PLAN

54. Bank implementation support within the original loan proved effective to: (i) monitor Program delivery and performance, including the proactive identification and collaborative resolution of emerging issues that may hinder the Program performance; and (ii) support the institutional strengthening, including the Program Action Plan implementation.

55. Yet the three staff-weeks a year estimated in the original loan have proven to be short: about six staff-weeks would be needed, yearly, for Program monitoring. Road safety expertise would be needed as part of the Bank implementation support team, in addition to the skills previously identified (project management, fiduciary, safeguards, road engineering).

56. For institutional strengthening support, in the original loan, the estimated Bank resources for implementation support proved to be adequate. For the proposed Program, the same six weeks a year to support institutional strengthening are anticipated. Based on the content of the Program Action Plan, the skill mix includes: procurement, environmental management, contract management, road safety management, information technology and roadworks quality control expertise.

Annex 5: Fiduciary Systems Assessment – Addendum

1. An incremental fiduciary assessment was carried out in order to: (i) update the fiduciary risks, taking into account the AF; (ii) indicate that there are either no high value contracts or, if they are, they would be dealt with in accordance with the PforR Procedures; and (iii) Update any actions needed to address capacity constraints in procurement, financial management, and related governance issues, taking into account the AF needs.
2. Overall, the Program fiduciary systems are deemed satisfactory, providing reasonable assurance that the Program funds would be used for their intended purposes. The incremental assessment has not identified any additional risks from those identified in the fiduciary assessment performed for the original operation.

1 THE PROGRAM

3. The updated Program is defined in Annex 7. Program implementing procedures remains globally the same as the ones of the original Program – See Annex 4 for further details.
4. **Program Financing.** The total estimated cost of the Program is US\$755.4 million equivalent over the 2017-2019 period. The Program would be financed by Government fiscal resources, as well as IADB, FONPLATA, CAF, FOCEM. Table 1 shows the planned expenditures for the three years of implementation.

Table 1: Program Financing (US\$ Million)

<i>Source</i>	<i>Amount (US\$ million)</i>	<i>% of Total</i>
Government	458.4	61%
IBRD	66.0	9%
IADB	81.2	11%
FONPLATA	31	4%
CAF	90.6	12%
FOCEM	28.2	4%
Total Program Financing	755.4	100%

5. **Program contract amounts.** The proposed Program is not expected to finance any contract at or above prevailing OPRC (Operations Procurement Review Committee) thresholds, which at the time of the assessment were at minimum USD 50 million for works, USD 30 million for goods and USD 15 million for consultants. The maximum contract amount is anticipated to be around US\$15 million for road rehabilitation and maintenance works.

2 PLANNING AND BUDGETING

6. **Procurement.** There were no advances in procurement planning in DNV with detailed planned dates, estimated costs and procurement methods for the activities financed by the Program.

The maximum detail of planning is a list of demand for public works prepared by DNV. This list is prepared based on the five-year plan but the level of detail does not get into planned dates.

7. **Financial management.** There are no changes in planning and budgeting arrangements for the proposed Additional Financing. The institutional framework that rules the elaboration of the National Budget involves a range of entities including OPP (Budget & Planning Office) and various departments within the Ministry of Economy and Finance (*Ministerio de Economía y Finanzas* - MEF). The budget is prepared according to a 5-year plan which is adjusted yearly according to macroeconomic forecasts. This plan is the basis for a monthly cash planning, agreed bilaterally between MEF and each spending unit included in the National Budget.

3 PROGRAM FIDUCIARY ARRANGEMENTS

3.1 PROCUREMENT

8. **New TOCAF** (*Texto Ordenado de Contabilidad y Administración Financiera*), effective June 2012, is still the main legal text regulating procurement in the country and it is available for download at the website of the State Court of Accounts (*Tribunal de Cuentas de la República* - TCR). TOCAF regulates procurement of goods, works and services and it is important to note that the same rules and procedures apply equally when procuring goods, works or services, even consulting services. In other words, there is no different set of procedures to recruit consultants. Equally important to note is the fact that there is a large number of legal texts regulating different aspects of procurement.

9. **Publication.** Most invitation for bids as well as bidding documents and contract awards have to be published at the *Compraestatales* website. This requirement is enforced via information systems. Payments can only be processed at the financial management system, named SIIF (*Sistema Integrado de Informaciones Financieras*), if a bidding process had been previously awarded through the procurement system, named SICE (*Sistema de Información de Contrataciones Estatales*), and published at *Comprasestatales*.

10. **Procurement methods.** Open competitive bidding, named *Licitación Pública* (LP) in TOCAF, is the default procurement method in the country. *Licitación Pública* requires publication of an invitation for bids at the official gazette, a newspaper of national circulation and the *Comprasestatales* website (www.comprasestatales.gub.uy). The other methods available are *Licitación Abreviada* (LA) for contracts up to approximately US\$75,000, “direct contract based on the amount” (CD) for contracts up to approximately US\$4,000 and “direct contract by exception” (CDE) for 27 cases listed in clause 33 of TOCAF not limited by any monetary threshold.

11. **Bidding documents.** General conditions of bidding documents for procurement of works were been updated recently by the National Procurement Agency (*Agencia de Compras y Contrataciones del Estado*, ACCE). These general conditions apply to all bidding documents published by MTOP. Also DNV uses the same format for all bidding documents for roads and bridges. During the original PforR operation, there were no substantial changes to mentioned bidding documents.

12. **IADB, FONPLATA, CAF, and FOCEM specific procurement arrangements.** Contracts financed by the IADB would be procured on the same basis (similar procurement

principles, same team) as any other contracts under the Program. Yet, the Government of Uruguay / IADB loan agreement has defined specific arrangements for some types of contracts is expected to be subject to IADB's own procurement policy, including specific bidding documents and procedures. FONPLATA-financed contracts are procured following Program systems, however, it is FONPLATA's policy that FONPLATA-financed contracts are awarded to firms from FONPLATA member countries (Uruguay, Brazil, Argentina, Paraguay, Bolivia, this restriction is deemed not to hinder procurement competitiveness, in the particular case of the Program. For CAF and FOCEM, contracts national procedures and templates would be applied.

13. **Contract administration.** There are no changes on contract administration procedures for the scaled-up Program.

3.2 FINANCIAL MANAGEMENT

14. **Accounting and financial reporting.** There are no changes from the previous assessment. Adequate Program records are maintained and financial reports produced and disseminated for decision-making, management, and Program reporting. At the Central Government level, budget execution and transactions are made by each spending unit and registered through the Integrated Financial Management System (Sistema Integrado de Informacion Financiera - SIIF). This process is implemented by MTOP and other key spending units through a detailed four step accounting sequence that supports expenditure internal controls for all contracts and activities expenditures included in the Program which includes: (1) Allocation of funds within the budget ceiling agreed between the MTOP and MEF; (2) Commitment of funds, by identifying the expenditure counterpart (supplier, etc.) (3) Payment obligation, which refers to registering accrued expenditures, i.e., legally incurred but yet unpaid; and (4) Payment through a Treasury managed bank account.

15. **Treasury management and funds flow.** There are no changes in the flow of funds process from the previous assessment. All payment requests are reviewed by the CGN for financial soundness and by the Country's Supreme Audit Institution (Tribunal de Cuentas) for legal consistency. If cleared for payment, they are processed through the SIIF system. After a payment instruction is given at SIIF, the process would move to MEF and treasury for releasing the funds. Considering that the source of financing would come from domestic sources (known as Rentas generales), payments would be made through the Single Treasury Account system (Cuenta Unica de Tesoreria - CUT), which is located at the Central Bank of Uruguay (Banco Central del Uruguay -BCU). Once the Government has met the agreed targets and the Bank has approved the associated DLIs, the withdrawals from the loan account would be deposited by the World Bank into an account established at the BCU.

16. **IADB, FONPLATA, CAF and FOCEM specific financial management arrangements.** would allow MTOP's internal procedures, as in the original Program.

4 CONTROLS AND AUDITS

17. **Controls and audits on Procurement.** There are no changes on TOCAF procedures. There is clear definition and segregation of functions in a procurement process. Officials and committees participating on the implementation of procurement processes work independently and

are accountable for their individual contribution to the process. The most important roles are performed by the *ordenador de gasto*, the *escribano*, the *comisión asesora de adjudicación* and the *Tribunal de Cuentas*.

18. **Financial management internal controls.** During the implementation of the original Program, the Financial Management Assessment pointed out as one of the major areas of fiduciary risks the fact that the MTOP's internal audit function focused mainly on reviewing internal processes and procedures rather than in conducting audits using a Risk Based Approach (RBA) framework, as recommended by international practices. Thus, the improvement of the internal audit unit capacity was considered as part of the program action plan (PAP).

19. The original PAP comprised a number of measures aimed at strengthening the internal audit function, which included the following:

- Signature of an agreement with the National Internal Audit Agency (*Auditoria Interna de la Nación* - AIN¹²) aimed at enhancing the coordination and the technical assistance from the AIN to the MTOP.
- Completion of a training on risk based audit delivered by the Uruguayan Institute of Internal Auditors, attended by the head of the MTOP's internal audit union and one of the unit's line managers.
- Inclusion of risk based audit methodology approved by the AIN for the procurement processes.

20. In addition to the above mentioned, the Bank provided two financial management workshops on Strengthening Accountability and Oversight in the Public Sector through Risk Based Audit (RBA) which took place during May and December 2016 in Montevideo, Uruguay. The main objective of both workshops was to promote a change on how the public sector officials working on internal audit, approach their oversight function. The aim was to achieve: (i) a more strategic and focused approach, and (ii) a better identification and mitigation of the major risks.

21. Despite these efforts, some challenges remain at the internal audit function of the MTOP, mainly due to the fact that the implementation of the RBA is still on an early stage with the first audit using this approach to be conducted on 2017.

22. **Program audit.** Audit and verification arrangements would be the same as in the original Program. Annual audit of Program financial statements would be audited based on Terms of Reference (ToRs) acceptable to the Bank. The audit would be conducted based on International Standards on Auditing issued by the International Federation of Accountants (IFAC). The audit report shall be submitted to the Bank within twelve months of each calendar year. It is expected that the financial audit would be conducted by the Uruguayan Supreme Audit Institution, which has been responsible for auditing the previous and current phase of the Program with satisfactory results.

¹² The AIN is a unit located at the Ministry of Finance in charge of coordinating from the Government's internal audit function from the technical perspective

5 TRANSPARENCY, ACCESS TO INFORMATION, COMPLAINT MECHANISMS

23. **Transparency.** SIIF registered information is consolidated and reported by the General Accounting Office (*Contaduría General de la Nación* - CGN) on a monthly basis, which is also available to the public, usually within 3 months of actual execution. The main annual budget execution report issued by the CGN is the report named *Rendicion de Cuentas y Ejecucion Presupuestal*, which is submitted to the Congress by the end of June of each year, and presented with the same level of disaggregation as it appears on the 5-year budget law.

24. **Access to Information and Complaint Mechanisms.** There are no changes on access to information that is available as it was described for previous assessment. Regarding Complaint mechanisms, bidders may complain about decisions during the procurement process directly to the agency implementing the bidding and a copy of the complaint shall be sent to the *Tribunal de Cuentas* for information only within 48 hours of its filing. Complaints freeze the course of bidding processes unless the implementing agency documents that the freeze would cause damages to the administration or stop of services. No changes on complaint mechanisms were found at the time of incremental assessment.

6 PROGRAM FIDUCIARY PERFORMANCE AND RISKS

25. Overall, Program fiduciary systems, including the fiduciary arrangements set out to implement the co-financers which are part of the Program, are maintained Satisfactory, providing reasonable assurance for the Program funds would be used for their intended purposes; it is assessed that no major fiduciary risk could prevent the Program from delivering its intended results as it was demonstrated on the original Program.

26. **Procurement performance.** There were no substantial changes in personnel that carries out procurement processes. Also there are no changes on procurement methods, but some delays on procurement processes were identified, as mentioned in the next paragraph.

27. **Timeliness.** For the original Program, data reviewed showed that DNV took on average eight months to award a contract for works through open bidding. The majority of the time spent to turnaround a procurement process goes on bid evaluation and award recommendation. On average, it was needed 200 days for DNV to review bids and go through all internal procedures for an award decision. During the implementation of the Program, the Bank carried out an analysis of lead procurement times in procuring road rehabilitation and maintenance works; it was found that there is a tendency to increase times of procurement processes. A report was discussed and provided to the MTOP, as part of the original operation Program Action Plan. The data show that times of processes from the publication of the specific announce to the award of the contract increased in 30 percent compared to times registered in the assessment for the original Program. The team identified the main causes of delays, with the collaboration of the MTOP staff. Building on this analysis, procurement procedures could be improved by developing procedures manual, as a reference document for all staff. The procedures manual should include improvements in procurement processes in order to avoid identified bottlenecks such as: unnecessary steps, non-standardized procedures; lack of procurement process monitoring systems and follow-up reports; not clear instructions from one stage to another. Training for DNV's staff involved in procurement processes should be developed

28. **Competitiveness.** According to data obtained during from a sample of contracts, DNV received on average five bids per bidding as it was found for the original Program assessment.
29. **Award criteria.** There are no changes on award criteria, clause 59 of the TOCAF allows for an award decision made on the basis of the “most convenient bid” but the majority of the award decisions are made according to the lowest price.
30. **Red flags.** Based on information provided and reviewed during the implementation of the Program, no fiduciary red flag have been identified.
31. **Assessment of fiduciary risks.** On Procurement, based on available data obtained in previous Assessment and supervision of the implementation of the Program, slow decision-making during bid evaluation and contract award is still the main risk to achieve results within desired timeframes and it may impact prices paid. On the other hand, data shows that procurement processes implemented by DNV are transparent and competitive, the majority of the awards are made to the lowest evaluated bidder. The assessment shows that identified opportunities for improvement could contribute to a better performing system overall, they are not considered major risks for the implementation of the Program. Overall based on the elements above, the fiduciary risk remains Moderate.

7 IMPROVING THE PERFORMANCE OF PROGRAM FIDUCIARY SYSTEMS.

32. **Procurement.** The following activities are suggested to improve the performance of the procurement system supporting the Program implementation (inputs for the Program Action Plan). Based on the analysis of procurement lead times and options to improve procurement efficiency, the updated Program Action Plan would include the implementation of improvements in the contracting process and the development of procurement processes manual. Overall, no structured training plan for procurement related staff was identified. A diagnosis of training needs and their implementation could improve staff capacity.
33. **Financial management.** The following activities are suggested to improve the performance of the Program financial management systems. The updated Program Action Plan, in the continuity of the previous one, would include the carrying out of risk-based audits during 2017, 2018 and 2019, along with training on best practices in internal control, such as the Three Lines of Defense model. This model outlines the components, principles, and factors necessary for an organization to effectively manage its risks through the implementation of internal control, and addresses how specific duties related to risk and control could be assigned and coordinated within an organization, regardless of its size or complexity.

8 FIDUCIARY ELEMENTS OF THE IMPLEMENTATION SUPPORT PLAN.

34. Procurement support during implementation of the AF would help MTOP’s assessment of the procurement decision-making process and it would monitor the performance of DNV’s procurement system based on the indicators and measurements presented in Annex 2 of this Fiduciary Assessment. The procurement supervision plan is presented in Table 2 next page.

Table 2 – Procurement Supervision Plan

Time	Focus
First twelve months	To provide support to DNV in improving efficiency of award decision-making.
12-36 months	(1) to provide support to DNV in improving efficiency of award decision-making. (2) to evaluate performance of DNV's procurement systems according to the implemented improvements.

Annex 6: Environment and Social Systems Assessment – Addendum

1 INTRODUCTION

1. The proposed Additional Financing (AF) to the Uruguay Road Rehabilitation and Maintenance Program would scale up rehabilitation and maintenance works being carried out on the National Road Network and would include specific investments in road safety.

2. This incremental Environment and Social Systems Assessment (ESSA) updates and complements the ESSA prepared in 2012 within the preparation of the original loan, based on the track-record of the Program, the evolution of the Program's environmental and social management systems and the potential new risks induced by the new activities included in the new Program (road safety investments).¹³

2 INCREMENTAL EVALUATION OF PROGRAM IMPACTS AND RISKS

3. The impacts and risks of the Program would not change substantially. The AF would go to the same type of works that were financed as part of the original loan, that is, works to rehabilitate and maintain the national road network, including the following:

- Pavement rehabilitation;
- Pavement resurfacing;
- Shoulders' rehabilitation and/or surfacing;
- Repairing and/or upgrading drainage systems;
- Rehabilitation and maintenance of road vertical and horizontal signaling;
- Bridge rehabilitation and maintenance works (structure repairing of deck, abutments, piers and foundations; or enhancement of bridge functional characteristics, such as increasing bridge extension, deck widening and increasing of bridge bearing capacity);
- Bridge reconstruction works, which consists of the construction of a new structure and its contiguous road accesses, to replace an existing bridge on the same location or in its vicinity;
- Acquisition, installation, and maintenance of road safety equipment;
- Provision of technical assistance (road condition surveys; training activities, carrying out of studies, etc.).

4. The only new aspect of the Program would be civil works to address specific road safety issues. These works would typically include:

- Modification of intersections geometry;
- Rectification of dangerous curves;
- Addition or widening of shoulders.

5. Both the works already financed as part of the Program, and those that would address specific aspects of road safety, would have a low environmental and social impact, as explained below.

¹³ Initial ESSA available at: <http://documents.worldbank.org/curated/en/317571468125379046/Uruguay-Road-Rehabilitation-and-Maintenance-Program-Project-environmental-and-social-assessment>

a) ENVIRONMENTAL IMPACTS AND RISKS

6. The potential environmental risks of the Program are assessed to be low. Rehabilitation and maintenance works are localized mainly in rural areas and main adverse impacts will occur during the road rehabilitation and maintenance periods that can extend from months to years but the impacts caused by these works are common and beneficiaries' do not consider them important, when balancing with the benefit of better roads, which in some departments are in very bad condition. The main environmental impacts expected from the Program are related to bridge works, operations at camp sites (including those of contractors and DNV sites), operation of asphaltic plants (air emissions); opening and operation of borrow pits and quarries (changes to land topography, contamination of water bodies and air quality); management of diesel tanks that can produce spills in the soil and water bodies, health and safety. Environmental cumulative impacts (*pasivos ambientales*) are also common at camp sites and DNV tries to request resolution of these in some contracts.

7. The main environmental issues identified during the supervision of the original loan, likely to occur within the proposed AF, include:

- At camp sites: i) quarries management (sometime these lack the required operational permits or produced excessive particulate matter in the air, noise and pollution of streams), ii) spills and management of hazardous and explosive materials (diesel tanks, oil containers), iii) management of concrete residues, solid wastes, etc.;
- At roads works: i) dust, ii) cutting of vegetation and lack of restoration plan and budget in the bidding document, iii) transit disruption, iv) lack of road safety measures for night transit, iv) works signs do not have information for beneficiaries how to contact DNV.

8. Good practices reported in the audit reports includes: i) most contractors are required to be ISO 14000 certified which been an important push towards improving health and safety and contracting environmental professionals for the audits, ii) publication of audit reports at CVU site (not yet at DNV), iii) construction by some contractors of containment areas around diesel tanks to control spills, iv) health and safety training in contractors camp sites.

9. Reviewing of a sample of environmental audits, no reports were found of issues related to issues due to influx of workers in the communities or confrontations of contractors with communities for sexual abuses. Although, communication mechanisms between DNV and the communities remain challenging due to instructions by MTOP to avoid direct communication. Some actions to improve communication have been added to the Program Action Plan (Annex 8.)

b) SOCIAL IMPACTS AND RISKS

10. Normally, works financed as part of the Program are carried out within existing rights of way, and therefore do not require land acquisition. During the life of the Program, only four works required land acquisition: the rehabilitation of a bridge over the Yaguarón River and its accesses, the rectification of a curve on Route 2, and the construction of a roundabout on Route 26 and Ave. Argentina. A total of 11 owners had to be expropriated to carry out these works. None of the expropriation cases caused physical displacement (relocation of persons). The 11 cases of expropriation are detailed in the following table:

Date	Expropriation file	Work	Affected area in m ²	Relocation of persons required?
2014	2013/6/159	Bridge and access, Río Yaguarón, Ruta 18	48,099	No
2014	2013/6/160	Bridge and access, Río Yaguarón, Ruta 18	47,028	No
2014	2013/6/161	Bridge and access, Río Yaguarón, Ruta 18	90,411	No
2014	2013/6/162	Bridge and access, Río Yaguarón, Ruta 18	2,760	No
2014	2013/6/163	Bridge and access, Río Yaguarón, Ruta 18	75,432	No
2015	210/6/14	Roundabout, Ruta 26 and Av. Argentina	358	No
2016	167/6/2016	Bridge and access, Arroyo Tres Cruces - Artigas	4,265	No
2016	166/6/2016	Bridge and access, Arroyo Tres Cruces - Artigas	214	No
2016	165/6/2016	Bridge and access, Arroyo Tres Cruces - Artigas	618	No
2016	168/6/2016	Bridge and access, Arroyo Tres Cruces - Artigas	36,562	No
2016	169/6/2016	Bridge and access, Arroyo Tres Cruces - Artigas	823	No
2016	2016/10/6/147	Curve rectification, Ruta 2	25,583	No

11. Works that are carried out with the specific objective of increasing road safety (modification of geometry or reorganization of intersections, rectification of dangerous curves and addition/ widening of shoulders) would have a similar impact. They would normally be carried out within the existing rights of way and would only exceptionally require the expropriation of land. Such works are unlikely to affect housing or other buildings, even if a work requires expropriation, as owners of properties adjacent to the road are obliged to leave a 25-meter strip, which means that there must be a minimum distance of 25 meters between any building (except walls or fences) and the right of way of the road.

12. Moreover, it is important to keep in mind that DNV exercises an effective control of existing rights of way, which are free of houses or other structures, except for stalls selling seasonal produce. These sales outlets (approximately 80 throughout the national road network) do not affect road safety and are not likely to interfere with the works to be financed by the AF.

13. As indicated in the Environmental and Social Systems Assessment (ESSA) of the original operation, the works that would be financed as part of the Program, including those to be carried out to improve road safety, would not affect indigenous communities. Although the 2011 census registered some 130,000 people with some degree of indigenous descent in Uruguay, there are no indigenous communities living in demarcated territories in the country, nor do there exist indigenous communities who speak the languages of the indigenous peoples who inhabited Uruguayan territory, such as the Charrua, Chana, Guenoa and Guarani. Indigenous communities had almost disappeared in the early nineteenth century as a result of the diseases brought by the Europeans and the war. The genocide culminated on April 11, 1831 with the Massacre of Salsipuedes, where most of the Charrua men were killed by the Uruguayan army under orders of President Fructuoso Rivera. The rest of the Charrua (about 300, between women and children) were divided and used as domestic servants.

14. The works planned as part of the Program would not affect pedestrians; they would only affect vehicular traffic. Therefore, there is no need to implement special measures to address the needs of persons with disabilities as part of the Program. However, persons with disabilities could be excluded from the benefits of the Program if they lack access to the public transportation system. Fortunately, Law 18551 (*Ley 18651 de Protección Integral de Personas con*

Discapacidad) provides adequate protection to persons with disabilities. All national public passenger transport companies are obliged to transport persons with disabilities free of charge (Art. 83). Companies that provide ground transportation services to the public must publicize, in a legible and understandable way, the frequency of service provided by units accessible to persons with disabilities, and they must also provide this information via telephone. The information about the services for persons with disabilities must be displayed in the units, terminals and main stops of the routes of the ground transportation companies; additionally, all tourist information offices, depending on the Ministry of Tourism and Sports or municipal governments, must have the information on the frequencies and provide this information via telephone (Art. 85). All public transport companies must have at least one unit accessible to persons with disabilities by route line (Art. 86).

3 INCREMENTAL ASSESSMENT OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS

a) ENVIRONMENTAL MANAGEMENT SYSTEMS

15. Most of the characteristics of the original Program are maintained; thus, similar impacts and risks are present for the Additional Financing. The Program will continue to be co-implemented by the Road Department (DNV) and the Uruguay Road Corporation (CVU). There is no significant change in the Program environmental management system and its instruments, that were evaluated within the initial Environmental and Social Program Systems Assessment. CAF and FOCEM, Program new-cofinanciers, use MTOP's environmental management systems for the works they finance.

16. **National Regulatory Framework.** There are more than 50 laws and decrees in different sectors that applied to the Program and the same legal regulatory analysis developed in the original ESSA is still valid and applies to the works to be financed with the AF. Regulations focus on: environmental impact assessment, protected areas, health and safety, labor contracting, waste management, road safety, conservation of cultural resources, among others. No major regulation change has occurred during Program implementation. The National Environmental Agency (DINAMA) will continue to be responsible to issue environmental licenses (AAP) in case investment characteristics or rating require them, as well as to open or borrow pits and quarries.

17. **DNV's Environmental Manual (EM).** It is the most important environmental regulatory instrument for the Program. The Decree 176/003 declares the EM as the official environmental instrument to guide the environmental management of all DNV operations. The EM is mandatory for all contractors and DNV roadworks. The EM was updated as part of the Action Plan agreed with DNV for the original program, but this version has not been officially approved by the National Agency of Environment (DINAMA). The EM is an environmental instrument respected internally in the MTOP and externally by DINAMA, CVU and by the contractors. The EM will continue to guide the environmental management of the program and thus several actions have been agreed with DNV to improve its application (see Environmental and Social Incremental Evaluation).

18. **Responsible entity for program environmental supervision.** There are four responsible parties involved in Program environmental supervision; they are the same as in the original loan. First, the UAV (*Unidad Ambiental de Vialidad*) now the Environment Department, will continue as the main unit responsible for preparing the environmental documentation, follow-up of environmental permits. This department is also now responsible, together with CVU, to perform

periodical audits to the construction works. An issue is that two current members of the Environment Department will retire at the end of 2017.

19. Second, the works engineers (*supervisores de obra*) of the DNV who belong to the Construction Department are currently in charge of both the on-site roadworks technical and environmental supervision. DNV suffers of limited and aging staff. There are only 10 engineers to carry out the overall contract supervision, including environmental compliance. For this reason, actions to hire additional environmental staff for the Environment Department has been proposed to provide support the scaled-up Program. Third, the Road Safety Department is responsible to review the quality and conditions of the signaling for the roads. Fourth, the Unit of Right of Way Tree Management, here is the only DNV unit that has an environmental specialist who is charge of requesting permits for cutting of native forest species.

20. **Environmental management instruments.** The same instruments identified in the original ESSA will remain valid for this scaled-up Program. Among these are: (i) DNV Environmental Manual; (ii) Environmental clauses in the bidding documents; (iii) Environmental Management Plan; (iv) Environmental Fee (*Rubro Ambiental*, 3 percent the total contract that is paid monthly to contractors, according to their environmental performance; current plan is to increase it to 6 percent); (v) Supervision Checklists (*Listas de Chequeo*), used by the supervision engineers to check contractors compliance); (vi) Environmental Quarterly Reports (*Informes trimestrales*, prepared by contractors and sent to the Environment Department); and (vii) periodical environmental audits performed by consultants of CVU and DNV and staff from the Environmental Department, among others.

21. **Capacity and performance.** The Environment Department lacks environmental specialists and it is understaffed. The Construction Department that supervised the works also does not have environmental staff. As part of the proposed Program Action Plan, several activities have been included to strengthened the environmental supervision of the Pprogram and support the human resources restrictions to carry out a close environment supervision.

b) SOCIAL MANAGEMENT SYSTEMS

22. The Department of Topographic Surveying (*Dirección Nacional de Topografía - DNTop*) and the Social Unit of the DNTop are responsible for addressing the potential adverse impacts of right-of-way acquisition required by the Program activities, including those aimed at addressing road safety issues; social management arrangements are therefore the same for DNV (*Dirección Nacional de Vialidad – Road Department*) and CVU (*Corporación Vial del Uruguay – Uruguay Road Corporation*) contracts. CAF and FOCEM, Program new-cofinanciers, use MTOP's social management systems for the works they finance.

23. As indicated above, the works to be financed under the Program (road maintenance and rehabilitation works, as well as works to increase road safety) would be carried out within existing rights of way and would not require land acquisition, except the rehabilitation of some bridges, works involving minor modifications in the road alignment to rectify curves, or changes in the geometry of intersections to make them safer. Any land acquisition under the Program would take place according to the provisions of the Expropriation Law (Law No. 3958 of March 28, 1912, and subsequent amendments). The DNTop is responsible for assessing losses and damages caused by expropriation and for determining just compensation. Funds to cover the costs of expropriations are provided by the MTOP.

24. As stated in the previous section, the activities planned under the Program, including those to increase road safety, are not expected to cause physical displacement (relocation). In the unlikely event that a work causes physical displacement, DNTop would be responsible for addressing the needs of displaced persons.

25. In cases of expropriation and resettlement, the Expropriation Law provides adequate protection to the affected persons, including property owners, renters with a contract, occupants with a permit, and occupants with possession rights derived from occupation of the land for more than 10 years. Most cases of expropriation are settled amicably. Few cases go to the courts and many such cases are not the result of disagreements over compensation, but are inheritance cases or cases where it has not been possible to identify the owner.

26. In the unlikely event that a future subproject affects an informal or illegal settlement, the DNTop would be responsible for developing relocation plans to assist displaced persons, regardless of their legal status.

27. In terms of expropriation and resettlement, the ESSA did not identify significant gaps between the legal framework and the OP9.00 core principles. This analysis is still valid and would apply to the Program as defined in the AF.

28. In terms of institutional capacity, however, there is room for improvement. The DNTop currently does not have a social specialist in the team. This shortcoming needs to be addressed urgently, since the social specialist plays an important role in the implementation of DNTop's Expropriation Manual and would be indispensable if a future work causes physical displacement (relocation).

4 ACTIONS TO STRENGTHEN THE PROGRAM'S IMPLEMENTATION SYSTEMS

29. The measures that would be implemented to strengthen the Program's management systems, and that would be included in the Program Action Plan, are described below.

a) MEASURES TO STRENGTHEN ENVIRONMENTAL MANAGEMENT

30. As result of the Environmental Incremental Evaluation, several measures have been agreed with DNV to be included in the Program Action Plan to support the strengthening of the environmental management system. The activities includes:

- Hiring of two environmental specialist as staff (no Consultants) to support the Environment Department of DNV and the Construction Department in charge of the supervision of the works;
- Implement a capacity building plan (9 trainings/3 each year) for the engineers of DNV in charge of design, supervision of contracts, CVU, staff of the Environmental Department (DEGAC), contractors, among others, in topics such as: reduction of air emissions, management of hazardous and explosive materials (hydrocarbons), reduction of noise and air pollution; road safety for road works, reduction contamination of water resources, conservation of biodiversity, adaptation to climate change, health and safety, communication with the communities, management of concrete residues, others topics of interest of DNV.

- Review and update the Environmental Manual (EM) according to measures included in the Environmental Incremental Evaluation and proposed its approval by Decree by the national authorities. In the last year of the project (2019), the EM will be review again.
- Every six months, DNV will hire environmental audits of the program works that will be sent to the Bank
- In the web site of DNV at the MTOP web site, a window of the program will be created to share the characteristics of the Project, disclose the Environmental Incremental Evaluation as requested by the Bank and inform of the environmental activities that will be developed by the program with the additional financing (training, audits reports, etc).
- DNV will hire services to improve the IT and internet services for the environmental management database of the program that in the future should be user friendly and be possible to access it from anywhere.

b) MEASURES TO STRENGTHEN SOCIAL MANAGEMENT

31. The following measures would be the inputs to the updated Program Action Plan, in order to improve Program social management:

- An experienced Social Specialist should be recruited to support the technical teams assigned to expropriation cases to survey the affected land and to value the losses and damages caused by the land takes. A Social Specialist would facilitate the application of the social components of DNTop's Expropriation Manual.
- DNTop should evaluate their systems to facilitate citizen engagement and to respond to grievances from the public. Based on this review, DNTop should prepare an action plan to improve these systems. The grievance redress system could be linked to MTOP's information system IDE (Infraestructura de Datos Espaciales del Ministerio de Transporte y Obras Públicas).
- DNTop should document compliance with the procedures in the Expropriation Manual on a regular basis (at least every semester) and the implementation of the Manual should be subject to periodic internal reviews or audits.

Annex 7: Detailed Description of Modified Program

32. The Program consists of the following activities within the Uruguay National Road Network, from January 1, 2013 until December 31, 2019:

- (i) Road rehabilitation and/or maintenance works, which consists of, *inter alia*: (i) pavement rehabilitation; (ii) pavement resurfacing; (iii) shoulders' rehabilitation and/or surfacing; (iv) repairing and/or upgrading drainage systems; and (v) rehabilitation and maintenance of road vertical and horizontal signaling.
- (ii) Bridge rehabilitation and maintenance works, which consists of, *inter alia*: (i) structure repairing of deck, abutments, piers and foundations; and (ii) the enhancement of bridge functional characteristics, such as increasing bridge extension, deck widening and increasing of bridge bearing capacity.
- (iii) Bridge reconstruction works, which consists of the construction of a new structure and its contiguous road accesses, to replace an existing bridge on the same location or in its vicinity.
- (iv) Road safety investments, which consists of, *inter alia*: (i) investments to improve visibility; (ii) investments to reduce road crashes severity; and (iii) the acquisition, installation and maintenance of road safety equipment.

Provision of technical assistance to DNV, DNTop and DINAPLO, including, *inter alia*: (i) the carrying out of road condition surveys; (ii) the carrying out of training and capacity building activities; and (iii) the carrying out of studies required to implement the Program.

33. Activities included in the Road safety item (Item 4 above) aim at improving road infrastructure safety. Potential investments per road section have been identified by DNV. Investments typically include:

- (i) Investments to improve visibility: (i) redesigning the geometry of accident-prone intersections, to better segregate traffic flows (including non-motorized transport, as the case may be) and improve visibility. Such category of investments could include roundabouts and, for high-volume roads, grade-separated intersections; (ii) adding, locally, a third lane to the roadway, in order to facilitate overtaking, in hilly environments; (iii) increasing the radius of sharp curves; and (iv) road illumination, in suburban environments.
- (ii) Investments to reduce road crashes severity, in case of roadway departure: installation and maintenance of guardrails, road shoulders widening.
- (iii) Road equipment investments: horizontal and vertical signals, speed humps.

34. Most expected Program investments would consist in roadway signaling, speed humps, guardrail installation and illumination. Road geometry modifications (for intersection, third lane or shoulder widening) are expected to be marginal interventions. Duplicating existing roads and creating new road sections (greenfield, including village/city by-pass) are not investments included in the Program scope. The Program would not include contracts beyond the OPCR thresholds; the maximum contract amount is anticipated to be around US\$15 million, according to the profile of the Program.

Annex 8: Modified Program Action Plan

The table below lists the activities added to the Program Action Plan.

Action Description	Due Date	Responsible Party	Completion Measurement	Original or Revised?
A. Works Planning Carry out yearly IRI surveys on at least 1/3 of the Uruguay national network.	12/31/2019	DNV	Copy of the IRI surveys.	New
B. Works supervision Update of the works supervision manual, based on lessons learned and three years of implementation, and train supervision staff to the new manual.	12/31/2019	DNV	Copy of the updated manual. Proof of training.	New (but follow up on previous PAP)
C. Road safety Develop road safety audits, covering at least yearly 200 km of the National Road Network, and train DNV staff accordingly.	12/31/2019	DNV	Copy of the audit reports. Proof of training.	New (linked to new DLI on road safety)
D. Resilience of road infrastructure networks Develop a methodology to analyze climate-sensitive areas of the National Road Network and prepare an engineering designs addressing at least one high-risk situation.	12/31/2019	DNV	Copy of the methodology. Copy of the engineering designs.	New
E. Procurement Prepare a manual to streamline procurement processes and train relevant people accordingly.	12/31/2019	DNV	Copy of the updated manual. Proof of training.	New
F. Financial Management: Risk-based audits Continue strengthening MTOP's Internal Audit Unit (IAU) by supporting the implementation of the risk-based audit model.	12/31/2017 12/31/2018 12/31/2019	DGS/IAU	Yearly verification of the application of the risk matrix in the audits carried out by the MTOP.	Revised (follow up on previous PAP)
G. Financial Management: Training	12/31/2019	DGS/IAU	Proof of training.	Revised (follow up)

Training in the three lines of defense model with emphasis of enhancing the coordination of said lines of defense within the MTOP.				on previous PAP)
H. Environmental management: environmental audits Implement an environmental audit every 6 months in a selected contracts of the Program	12/31/2017 12/31/2018 12/31/2019	DNV/DEGA C	Bi-yearly environmental audit reports available for a sample (30%) of the on-going works contracts.	Original (continued)
I. Environmental management: Human resources Recruitment of two permanent professionals (not Consultants), with training and environmental experience (environmental sciences, forestry, biology, etc.) who are both graduates of the University of the Republic or other institutions recognized by the Ministry of Education.	6/30/2017	DNV/DEGA C	Memo to the Bank and copy of contracts	New
J. Environmental management: Data management Improve existing remote access, via internet, to the central database of projects.	12/31/2019	DNV/DEGA C	Audit report verifying operation.	New
K. Environmental management: Training Conduct 9 workshops, of at least 1 day and with at least 5 DNV and CVU Project Managers, DEGAC staff and other departments, and for relevant workshops, private sector participation to address issues such as: management of oils, asphaltic plants and air pollution, noise management, road safety, water pollution mitigation, climate change adaptation, occupational health and safety and dissemination of the new Environmental Manual.	12/31/2019	DNV/DEGA C	3 workshops per year. Copy of training material and attendance log.	New
L. Environmental management: Webpage Include a window within the DNV website, which describes the characteristics of the Program, its progress, and the activities that are implemented for its environmental management.	12/31/2017	DNV/DEGA C	Direct Bank verification.	New
M. Environmental management: Environmental manual		DNV/DEGA C		Revised (follow up)

Officialization of the current Environmental Manual by the authorities. Review of the Manual factoring in lessons learned from program implementation.	6/30/2017 12/31/2019		Copy of presidential decree. Minute of the updated Manual	on previous PAP)
N. Social management: Human resources Set-up a resolution between DNTop and DGS to provide ad-hoc and part-time support from a social specialist to accompany roadworks as needed. Provide the necessary training to the specialist.	12/31/2017 12/31/2017 (yearly by 12/31)	DNTop - DGS	Copy of the DNTop / DGS resolution. Proof of training. Social specialist annual report.	New
O. Social management: Expropriation manual Integrate into the Expropriation records the traceability of the expropriation process and review, ex-post, compliance with the Expropriation Manual.	12/31/2017 12/31/2018 12/31/2019	DNTop	Ex-post review reports.	New (but follow-up on previous PAP)