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Report No: RES18428

RESTRUCTURING PAPER  
ON A  
PROPOSED PROJECT RESTRUCTURING  
OF  
WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT  
LOAN IBRD-80430  
26-May-2011

TO THE  
REPUBLIC OF INDONESIA

{February 2016}

TRANSPORT & ICT  
EAST ASIA AND PACIFIC REGION

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## ABBREVIATIONS AND ACRONYMS

DGH	Directorate General of Highways
EA	Environmental Assessment
ESMF	Environment and Social Management Framework
LARAP	Land Acquisition and Resettlement Action Plan
MPW	Ministry of Public Works
PDO	Project Development Objective
RPF	Resettlement Policy Framework

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Country Director:	Rodrigo A. Chaves
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REPUBLIC OF INDONESIA  
Western Indonesia National Roads Improvement Project

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## DATA SHEET

*Indonesia*

*Western Indonesia National Roads Improvement Project (P090990)*

*EAST ASIA AND PACIFIC*

*Transport & ICT*

Report No: RES18428

<b>Basic Information</b>									
Project ID:	P090990	Lending Instrument:	Specific Investment Loan						
Regional Vice President:	Axel van Trotsenburg	Original EA Category:	Partial Assessment (B)						
Country Director:	Rodrigo A. Chaves	Current EA Category:	Partial Assessment (B)						
Senior Global Practice Director:	Pierre Guislain	Original Approval Date:	26-May-2011						
Practice Manager/Manager:	Michel Kerf	Current Closing Date:	31-Dec-2017						
Team Leader(s):	Elisabeth Goller,Amilia Aldian								
Borrower:	Ministry of Finance								
Responsible Agency:	DGHW - MPW,								
<b>Restructuring Type</b>									
Form Type:	Full Restructuring Paper	Decision Authority:	Country Director Approval						
Restructuring Level:	Level 2								
<b>Financing ( as of 16-Feb-2016 )</b>									
Key Dates									
Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date		
P090990	IBRD-80430	Effective	26-May-2011	14-Dec-2011	12-Mar-2012	31-Dec-2017	31-Dec-2017		
Disbursements (in Millions)									
Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P090990	IBRD-80430	Effective	USD	250.00	250.00	0.00	50.14	199.86	20
<b>Policy Waivers</b>									
Does the project depart from the CAS/CPF in content or in other significant respects?							Yes [ ]	No [ X ]	

Does the project require any policy waiver(s)?	Yes [ ]	No [ X ]
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### A. Summary of Proposed Changes

The changes proposed under this restructuring include (i) the cancellation of road work packages 9 (Rantau Tijing - Kota Agung) and 18 (Mukomuko - Batas Sumbar) as well as the Way Taau bridge from component 1, which reduces the total number of packages from 21 to 19; (ii) the cancellation of component 3 on road sector institutional development; (iii) the addition of a new activity on slope protection design and management under component 2; (iv) the modification of two intermediate project end targets related to road and bridge improvement, the replacement of the indicator related to the road sector institutional development component with an indicator related to the new slope protection activity, and some other minor adjustments to the results frameworks to facilitate project monitoring and evaluation; (v) the reallocation of funds between disbursement categories; (vi) an adjustment in the disbursement estimates; (vii) name changes in the implementation agencies due to the recent reorganization within the Ministry of Public Works and Housing (MPWH) and the Directorate General for Highways (DGH); and (viii) other minor changes to the procurement arrangements. There will be no partial cancellation of funds because the anticipated cost of road works is significantly higher (close to 50% higher) than estimated at appraisal and thus will absorb the balance freed by this restructuring and the gains from the devaluation of the Indonesian Rupiah vis-a-vis the US\$ (for details see section on Appraisal Summary below).

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

Appraisal Summary Change in Social Analysis	Yes [ ] No [ X ]
Appraisal Summary Change in Environmental Analysis	Yes [ ] No [ X ]
Appraisal Summary Change in Risk Assessment	Yes [ ] No [ X ]

## B. Project Status

This project had a slow start mainly because of the need to hire the project management support (Core Team Consultant - CTC) and engineering design consultants (Design and Supervision Consultant - DSC) before the civil works could be procured. In addition, project implementation in general has been slow for various reasons, including coordination problems between the various entities involved in project implementation, not enough project ownership at all levels, and lengthy discussions to agree on procurement aspects not originally envisaged in the loan agreement, such as the use of post-qualification and e-procurement. This said, a new team has taken over in DGH in June/July 2015, and the implementation progress has picked up considerably. Currently, all civil works are ongoing or in the bidding process. It is expected that all road civil works will be ongoing by March 2016. The Bank team obtained a grant to intensify work supervision and help DGH improve road work quality. In terms of implementation support, the DSC and CTC are both operational, but their performance has not always been fully satisfactory. Measures, such as replacing and adding staff, have been taken to correct shortcomings. Lastly, the contracting process of the slope protection design and management activity is about to start.

## C. Proposed Changes

### Development Objectives/Results

#### Project Development Objectives

Original PDO

The Project Development Objective (PDO) is to increase the effective use of selected sections of national roads along the Western Sumatra Corridor by reducing road user costs.

#### Change in Project's Development Objectives

#### Change in Results Framework

Explanation:

In terms of results framework, the following changes are necessary: (i) clarify how the baseline and target values for the results indicator three on the average annual daily traffic (AADT) are obtained; (ii) modify the target values of the intermediate indicators of component 1 related to the km of roads and meters of bridges to be improved; (iii) provide a definition of "technical audits satisfactorily completed" and "road safety audits" for the intermediate indicators related to component 2; and (iv) replace the indicator regarding road sector institutional development (% of environment unit staff trained and capacitated to mitigate disaster risk related to road network) with an indicator related to the new slope protection activity (satisfactory completion of slope protection designs).

(i) For the AADT, the PAD provides some guidance on how the baseline and the target values for the indicator have to be calculated, but this proved to be insufficient. Consequently, this restructuring paper clarifies that the baseline is obtained by calculating the simple average of the AADT of the 19 WINRIP sections, which are taken from page 41 of the PAD. This leads to a baseline value of 8,241 vehicles.

The project end target (for 2017) is obtained by using a growth rate calculated by weighting the growth forecasts for four vehicle types found on page 39 of the PAD with the typical traffic composition from the 2010 Master Plan for Arterial Road Network in Sumatra Island (see below). The calculation is as follows:

$$\text{AADT for year } i = \text{AADT for year } i-1 * (1+x),$$

where x is the growth rate for a given year i and is calculated as follows:

$$x = (M * C_m) + (C * C_c) + (B * C_b) + (T * C_t),$$

where M=growth for motorcycles (12% for years 1-5 and 8% for years 5-25); C<sub>m</sub>=traffic composition for motorcycles (54.9%); C=growth for cars (8% for years 1-5 and 6% for years 5-25); C<sub>c</sub>=traffic composition for cars (24.6 %); B=growth for buses (3% for years 1-5 and 3% for years 5-25); C<sub>b</sub>=traffic composition for buses (2.7%); and T=growth for trucks (6% for years 1-5 and 5% for years 5-25); C<sub>t</sub>=traffic composition for trucks (17.8%).

For years 1-5, this growth rate is 0.097 and for years 6-25, this growth rate is 0.068.

Based on this calculation, the project end target value is 14,947 vehicles.

(ii) The two indicator targets related to the km of roads and meters of bridges improved are changed to reflect the cancellation of road packages 9 and 18 and the fact that the road sections lengths of packages 1, 2, 4, 5, 6, 11, 13, 17, 19 and 21 are slightly different from what was indicated in the PAD. The original target of improving 715 km of roads and replacing 194 m of bridges is replaced by the new targets of 640 km of road improvements and 160 m of bridge improvements.

(iii) For the purpose of project monitoring and evaluation, "technical audits" refers to the inspections carried out by the team of consultants hired under TFOA018 to support DGH in the improvement of road work quality. "Satisfactory completion of these audits" means that DGH provided a follow-up report on the inspection findings satisfactory to the Bank. "Road safety audits" mean audits carried out during the design phase of the road works by CTC.

## Financing

### Reallocations

Explanation:

The reallocation of funds between disbursement categories is necessary because of the cancellation of component 3 and the inclusion of an additional activity under component 2.

The funds available in the disbursement category "Unallocated" will likely be used for price escalation and possible contract modifications. The Borrower will request the reallocation of these funds once the final costs for all road packages are known.

Ln/Cr/TF	Currency	Current Category of Expenditure	Allocation		Disbursement % (Type Total)	
			Current	Proposed	Current	Proposed
IBRD-80430	USD	LN 8043-CW PT 1	220,400,000.00	220,400,000.00	70.00	70.00
		LN 8043-GO, Non CS, CS & IOC PT2	16,000,000.00	<b>17,000,000.00</b>	100.00	100.00
		LN 8043-GO, Non CS, CS PT3	1,000,000.00	<b>0.00</b>	100.00	100.00

		LN 8043-GO, Non CS, CS & IOC PT4	0.00	0.00	100.00	100.00
		UNALLOCATED	12,600,000.00	12,600,000.00	0.00	0.00
		Designated Account	0.00	0.00	0.00	0.00
		<b>Total:</b>	250,000,000.00	250,000,000.00		

### Disbursement Estimates

### Change in Disbursement Estimates

#### Explanation:

The disbursement estimates are adjusted to reflect the delays in project implementation.

Fiscal Year	Current (USD)	Proposed (USD)
2011	0.00	0.00
2012	30,000,000.00	0.00
2013	50,000,000.00	2,207,915.00
2014	50,000,000.00	4,055,695.62
2015	50,000,000.00	17,427,962.73
2016	30,000,000.00	41,384,275.00
2017	20,000,000.00	80,000,000.00
2018	20,000,000.00	104,924,151.65
<b>Total</b>	250,000,000.00	250,000,000.00

### Components

### Change to Components and Cost

#### Explanation:

The changes to the components consist of (i) the deletion of work packages 9 (Rantau Tijang - Kota Agung) and 18 (Mukomuko - Batas Sumbar) as well as the Way Taau Bridge from component 1 and the consequent reduction of the originally envisaged road improvement of 715.6 km to approximately 640km and the originally envisaged bridge replacement from approximately 195 m to 160 m, (ii) the cancellation of component 3, and (iii) the inclusion of an additional activity on slope protection design and management under component 2, which includes the consulting services for the design of the road improvement works.

The need for the cancellation of the two road packages and the bridge from component 1 arises from the fact that the respective road links were resurfaced with local funds and are now in good condition. Consequently, intervening on these links to widen the respective roads would have been an inefficient use of funds. In a first stage, DGH proposed two alternative road packages. However, the work implementation for those proposed packages would have gone beyond the closing date and the loan funds would have been insufficient to cover all packages because of the increase in road work costs.

Component 3 was meant to strengthen the Environment and Road Safety Unit, also in charge for disaster management, which was created when this project was prepared. Since then this Unit has been growing and has

recently been put under the Road Development Directorate, which gives it much more visibility. This Unit has been carrying out capacity strengthening and has been working on disaster management related national norms and standards. They have also been carrying out studies on disaster analysis and mapping in various parts of Indonesia. In 2012, they completed a disaster risk assessment and mapping for the project area (“2012 Disaster Risk Analysis on National Roads for Sumatra”). Since they had local resources to carry out their work, it has taken them until the end of 2014 to come up with the terms of reference for the activities to be financed under the project. These included disaster risk assessment for some of the remaining parts of the country, conferences and workshops, revision of standards and norms, among others. These activities were basically a continuation of the work they had already been doing earlier. When they started the bidding process in 2015, a new Minister came in and questioned the fact that they planned to use loan resources for activities they had been previously carrying out and financing on their own. He asked for something much more practical with the possibility of an immediate application and suggested to focus on slope protection design/management, an area where DGH's experience is more limited. Consequently, DGH proposed the cancellation of component 3 and the inclusion of a new activity on slope protection design and management under component 2. This activity will focus on the Western Sumatra corridor consisting of flat terrain near the beach and hilly sections called “Bukit Barisan” in other areas, which need to be studied and protected from erosion risks. This change does not affect the achievement of the PDO.

In line with the previous change, the cost by component needs to be changed as shown in the table below.

<b>Current Component Name</b>	<b>Proposed Component Name</b>	<b>Current Cost (US\$M)</b>	<b>Proposed Cost (US\$M)</b>	<b>Action</b>
Betterment and Capacity Expansion of National Roads		314.90	314.90	Revised
Implementation Support		16.00	<b>17.00</b>	Revised
Road Sector Institutional Development		1.00	<b>0.00</b>	Revised
Contingency for Disaster Risk Response	Contingency for Disaster Risk Response	0.00	0.00	
	<b>Total:</b>	331.90	331.90	

#### **Other Change(s)**

##### **Change in Procurement**

Explanation:

The National Competitive Bidding Annex 2 to Schedule 2 of the Loan Agreement will be updated to reflect the introduction of an amendment to Presidential Regulation No. 54/2010 and some other minor changes.

##### **Other Change(s)**

Explanation:

To reflect the new organizational structure of DGH approved in March 2015, the following changes will be needed throughout the loan agreement: “Ministry of Public Works” and “MPW” will be replaced by “Ministry of Public Works and Housing” and “MPWH” and the “Directorate of Planning” and “DOP” will be changed to “Directorate of Road Network Development” and “DRND”.

## Appraisal Summary

### Appraisal Summary Change in Economic and Financial Analysis

#### Explanation:

As mentioned previously, the cost of road civil works increased by close to 50% since appraisal. This is due to (i) new pavement design standards for roads in Indonesia, which among others, increase the pavement design life from 10 to 20 years, enlarge pavements' and shoulders' widths, enhance drainage requirements, improve pavement structures, and improve the horizontal and vertical alignments to enhance road safety aspects; (ii) delays of two to three years in the completion of bidding processes, which has entailed a cost increase due to road construction cost escalation, and (iii) most likely also because of low quality original cost estimates.

Given this large increase of road civil works costs, the Bank team carried out an assessment of the economic impact of those changes. This analysis showed that when leaving all other elements of the original economic analysis constant and only considering a 47% increase of road civil works cost, the Economic Internal Rate of Return (EIRR) of this project would decrease from 30% to 20%. In this scenario without considering any additional benefits due to the new design standards, three road works would have a relatively low EIRR, but still above the reference mark of 6% the Bank is currently considering (package 17: 6.7%, package 5: 7.1%, and package 12: 8.1%).

The additional benefits from the improved pavement standards are likely to include reduced expenditures in road maintenance because of the stronger pavements and enhanced drainage structures, road safety benefits because of larger shoulders, and additional road user cost and travel time savings because of less interruptions caused by road works. The team has not quantified these additional benefits because of a lack of reliable data. However, DGH is currently embarking in a nationwide road data collection exercise, and the team is confident that the necessary data will be available by the end of the project.

## ANNEX 1: RESULTS FRAMEWORK

Project Name:	Western Indonesia National Roads Improvement Project (P090990)	Project Stage:	Restructuring	Status:	DRAFT		
Team Leader(s):	Elisabeth Goller	Requesting Unit:	EACIF	Created by: Maria Jose Sala Pelufo on 03-Mar-2015			
Product Line:	IBRD/IDA	Responsible Unit:	GTI02	Modified by: Elisabeth Goller on 12-Jan-2016			
Country:	Indonesia	Approval FY:	2011				
Region:	EAST ASIA AND PACIFIC	Lending Instrument:	Specific Investment Loan				
<b>Project Development Objectives</b>							
Original Project Development Objective: The Project Development Objective (PDO) is to increase the effective use of selected sections of national roads along the Western Sumatera Corridor by reducing road user costs.							
<b>Results</b>							
Core sector indicators are considered: Yes			Results reporting level: Project Level				
<b>Project Development Objective Indicators</b>							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	Increase of AADT on project road sections (all vehicle types)	<input type="checkbox"/>	Number	Value	8241.00	12696.00	14947.00
				Date	31-Dec-2010	31-Mar-2015	31-Dec-2017
				Comment			

	Increase of AADT on project road sections (all vehicle types)	<input type="checkbox"/>	Number	Value	7837.00	12696.00	14214.00
				Date	31-Dec-2010	31-Mar-2015	31-Dec-2017
				Comment			
No Change	Average vehicle operating cost for a typical car reduced by at least 5% on project roads (base year operating cost: US\$0.19/veh-km)	<input type="checkbox"/>	Percentage	Value	0.00	0.00	5.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			
No Change	Average vehicle operating cost for a typical bus reduced by at least 8% on project roads (base year operating cost: US\$0.35/veh-km)	<input type="checkbox"/>	Percentage	Value	0.00	0.00	8.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			
No Change	Average vehicle operating cost for a typical heavy truck reduced by 10% on project roads (base year operating cost: US\$0.65 veh-km)	<input type="checkbox"/>	Percentage	Value	0.00	0.00	10.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			
No Change	Average passenger travel time for light vehicles reduced by at least 20% on project roads (base year speed: 51 km/h)	<input type="checkbox"/>	Percentage	Value	0.00	3.70	20.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment		For 9 ongoing works only.	
No Change	Average passenger travel time for large buses reduced by at least 20% on project roads (base year speed: 46 km/h)	<input type="checkbox"/>	Percentage	Value	0.00	-2.17	20.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment		For 9 ongoing works only.	

No Change	Average passenger travel time for heavy trucks reduced by at least 20% on project roads (base year speed: 40 km/h)	<input type="checkbox"/>	Percentage	Value	0.00	-6.53	20.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment		For 9 ongoing works only.	
<b>Intermediate Results Indicators</b>							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
New	Satisfactory completion of slope protection designs	<input type="checkbox"/>	Number	Value	0.00	0.00	3.00
				Date	15-Dec-2015	15-Dec-2015	31-Dec-2017
				Comment			
Revised	Number of km of improved national roads in the project region as planned	<input type="checkbox"/>	Kilometers	Value	0.00	134.54	640.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			Please note that the original value for the indicator's end target below (630 km) has been automatically taken from the ISR and cannot be modified in this table to show the real original target value in the PAD, which is 715.6 km.

	Number of km of improved national roads in the project region as planned	<input type="checkbox"/>	Kilometers	Value	0.00	68.50	630.00
				Date	31-Dec-2010	13-Jun-2015	31-Dec-2017
				Comment			
Revised	Number of meters of improved bridges	<input type="checkbox"/>	Meter(m)	Value	0.00	0.00	160.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			Please note that the original value for the indicator's end target below (160 m) has been automatically taken from the ISR and cannot be modified in this table to show the real original target value in the PAD, which is 194 m.
	Number of meters of improved bridges	<input type="checkbox"/>	Meter(m)	Value	0.00	0.00	160.00
				Date	31-Dec-2010	13-Jun-2015	31-Dec-2017
				Comment			

No Change	Satisfactory completion of technical audits for all road projects of component 1	<input type="checkbox"/>	Percentage	Value	0.00	16.00	100.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment		This value corresponds to 3 projects out of 19.	
No Change	Satisfactory completion of road safety audits for all road projects of component 1	<input type="checkbox"/>	Percentage	Value	0.00	100.00	100.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			
Revised	Roads rehabilitated, Rural	<input checked="" type="checkbox"/>	Kilometers	Value	0.00	134.54	640.00
				Date	31-Dec-2010	10-Nov-2015	31-Dec-2017
				Comment			Please note that the original value for the indicator's end target below (630 km) has been automatically taken from the ISR and cannot be modified in this table to show the real original target value in the PAD, which is 715.6 km.

	Roads rehabilitated, Rural	<input checked="" type="checkbox"/>	Kilometers	Value	0.00	68.50	630.00
				Date	31-Dec-2010	13-Jun-2015	31-Dec-2017
				Comment			
Marked for Deletion	% of Environment unit staff trained and capacitated to mitigate disaster risk related to road network (230 staff)	<input type="checkbox"/>	Percentage	Value	0.00	0.00	100.00
				Date	31-Dec-2010	13-Jun-2015	31-Dec-2017
				Comment			