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Report No: 55593-ID

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$250 MILLION

TO THE

REPUBLIC OF INDONESIA

FOR A

WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT

April 23, 2011

Indonesia Sustainable Development Unit
Sustainable Development Department
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective January, 2011)

Currency Unit	=	Indonesian Rupiah
IDR 1,000	=	US$0.1111
US$1	=	IDR 9,000

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AADT	Annual Average Daily Traffic
ACAP	Anti Corruption Action Plan
ADB	Asian Development Bank
AusAID	Australian Agency for International Development
AMDAL	Analisa Mengenai Dampak Lingkungan (Environmental Impact Assessment)
ASEAN	Association of South East Asian Nations
WP	Work Program
Bappenas	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
Bapedalda	Badan Pengendalian Dampak Lingkungan Daerah (Local Environmental Impact Management Agency)
BNPB	Badan Nasional Penanggulangan Bencana (National Disaster Management Agency)
BPK	Badan Pemeriksan Keuangan (Supreme Audit Institution)
CDD	Community Driven Development
CTC	Core Team Consultant
CPS	Country Partnership Strategy
DGH	Directorate General of Highways, Ministry of Public Works
DGLT	Directorate General of Land Transport, Ministry of Transport
DOP	Directorate of Planning, Ministry of Public Works
DSC	Design and Supervision Consultant
ECOP	Environmental Code of Practice
EINRIP	Eastern Indonesia National Roads Improvement Project
EIRR	Economic Internal Rate of Return
EIRTP-2	Second Eastern Indonesia Region Transport Project
ESMF	Environment and Social Management Framework
GOI	Government of Indonesia
ICB	International Competitive Bidding
JBIC	Japan Bank for International Cooperation
IndII	Indonesia Infrastructure Initiative (AusAID)
IP	Indigenous People
JICA	Japan International Cooperation Agency
KPK	Komisi Pemberantasan Korupsi (Anti-Corruption Commission)
LARAP	Land Acquisition and Resettlement Action Plan
LARF	Land Acquisition and Resettlement Policy Framework
MPW	Ministry of Public Works
MOT	Ministry of Transport
MTEF	Medium Term Expenditure Framework
NAP-DRR	National Action Plan for Disaster Risk Reduction
NCB	National Competitive Bidding
NPV	Net Present Value
ORAF	Operational Risk Assessment Framework

PAP	Project Affected Person
PBB	Performance Based Budgeting
PHRD	Policy and Human Resources Development Facility (Japan)
PNPM-3	Third National Program for Community Empowerment in Rural Areas
PPP	Public-Private Partnership
OP	Standard Operational Procedure
SRIP	Strategic Roads Infrastructure Project
SRRP	Sumatra Region Roads Project
UKL	Upaya Pengelolaan Lingkungan (Environmental Management Plan)
WINRIP	Western Indonesia National Roads Improvement Project
WP	Work Program

Vice President:	Mr. James W. Adams, EAPVP
Country Director:	Mr. Stefan Koeberle, EACIF
Sector Director:	Mr. John Roome, EASSD
Sector Managers:	Mr. Franz Drees-Gross, EASIS
	Mr. N. Vijay Jagannathan, EASIN
Task Team Leader:	Mr. Mustapha Benmaamar, EASIS

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IBRD 38338 West Sumatera
IBRD 38339 Bengkulu
IBRD 38340 Lampung

PAD DATA SHEET

INDONESIA

WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT

PROJECT APPRAISAL DOCUMENT

EAST ASIA AND PACIFIC
Indonesia Sustainable Development Unit (EASIS)
Sustainable Development Department

Date: April 23, 2011 Country Director: Mr. Stefan G. Koeberle Sector Director: Mr. John Roome Sector Managers: Mr. Franz Drees-Gross and Mr. N. Vijay Jagannathan Project ID: P090990 Lending Instrument: Specific Investment Loan	Team Leader: Mustapha Benmaamar Sectors: Roads and highways (80%); General transportation sector (20%) Themes: Rural services and infrastructure (P); Other accountability/anti-corruption (S) Environmental screening category: Partial Assessment

Project Financing Data:

Proposed terms: IBRD loan with a variable spread and a final maturity of 24.5 years including a grace period of 9 years.

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

For Loans/Credits/Others:

Total Bank financing (US$m.): 250.00

Source	Total Amount (US$M)
Total Project Cost:	350
Co-financing:	100
Total Bank Financing:	250
IBRD	

Borrower:
Republic of Indonesia
Responsible Agency:
Ministry of Public Works, Directorate General of Highways
Jl. Pattimura No. 20, Jakarta Selatan 12110, Indonesia
Tel: (62-21) 720-0281, 727-6581, Fax: (62-21) 720-1760, 727-9232
Contact: Mr. Harris BATUBARA, Director of Planning, Directorate General of Highways

Estimated Disbursements (Bank FY/US$ m)							
FY	2012	2013	2014	2015	2016	2017	2018
Annual	30	50	50	50	30	20	20
Cumulative	30	80	130	180	210	230	250

Project Implementation Period: Start: December 2011 End: December 31, 2017
Expected effectiveness date: October 15, 2011
Expected closing date: December 31, 2017

Does the project depart from the CAS in content or other significant respects?	○ Yes ● No
If yes, please explain:	
Does the project require any exceptions from Bank policies? Have these been approved by Bank management? Is approval for any policy exception sought from the Board?	○ Yes ● No ○ Yes ○ No ○ Yes ● No
If yes, please explain:	
Does the project meet the Regional criteria for readiness for implementation?	● Yes ○ No

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.

Project description

The Project consists of the following parts:

Component 1: Betterment and Capacity Expansion of National Roads (US$314.9 million). Betterment (including base course strengthening, minor widening, providing a new asphalt wearing course and improving drainage); and capacity expansion of approximately 715.6 kilometers of National Roads, including replacement of approximately 194 meters of bridges.[1]

Component 2: Implementation Support (US$16.0 million). Providing support to the MPW for the implementation of the civil works, including: (a) provision of Core Team Consultants and Design and Supervision Consultants and road safety audits; and (b) Project management support and technical audits.

Component 3 Road Sector Institutional Development (US$1.0 million). Providing technical assistance and capacity building support to strengthen disaster risk mitigation in the road sector, including capacity building support for the new environment/risk mitigation and road safety unit of DGH capacity to conduct disaster risk assessments and planning, risk mapping of land-slides, coastal erosion, earthquake and floods, and analysis of alternative designs for road segments that pass through critical environmental assets and vulnerable areas.

[1] In Indonesia, "betterment" typically involves base course strengthening, minor widening, providing a new asphalt wearing course, and improving drainage. In most cases, the road already has an asphalt pavement.

Component 4: Contingency for Disaster Risk Response (US$0). Providing preparedness and rapid response to disaster, emergency and/or catastrophic events, as needed.

Safeguard policies triggered:	
Environmental Assessment (OP/BP 4.01)	● Yes ○ No
Natural Habitats (OP/BP 4.04)	○ Yes ● No
Forests (OP/BP 4.36)	○ Yes ● No
Pest Management (OP 4.09)	○ Yes ● No
Physical Cultural Resources (OP/BP 4.11)	●Yes ○No
Indigenous Peoples (OP/BP 4.10)	○ Yes ● No
Involuntary Resettlement (OP/BP 4.12)	● Yes ○ No
Safety of Dams (OP/BP 4.37)	○ Yes ● No
Projects on International Waters (OP/BP 7.50)	○ Yes ● No
Projects in Disputed Areas (OP/BP 7.60)	○ Yes ● No

Conditions and Legal Covenants:

Loan/ Project Agreement Reference	Description of Covenant	Date Due
1. Section 4.01	Loan Effectiveness Conditions: a) The bid documents for WP -1, satisfactory to the Bank and the Borrower, shall have been adopted by MPW. b) The Project Management Unit shall have been established and the Project Implementation Plan and Project Management Manual (including the Environmental and Social Safeguards Framework and Anti-Corruption Action Plan) satisfactory to the Borrower and the Bank shall have been adopted by the MPW.	Before effectiveness of the loan.
2. Schedule 2, Section IV.B.	Disbursement Condition for Part 4 of the Project: No withdrawal shall be made until: (i) the Borrower has declared a disaster, emergency or catastrophic event through the relevant national, Province- or Local Government-level or other authority, and the Bank and the Borrower have agreed to use the proceeds of the Loan under Part 4 of the Project with respect thereto; and (ii) the Bank and the Borrower have entered into a written arrangement and/or the Borrower has adopted a supplement to the Project Management Manual, the Environmental and Social Safeguards Management Framework, the Land Acquisition and Resettlement Policy Framework and the Environmental Codes of Practice and any other documents as required by the Borrower and the Bank, and a supplement to the Project Implementation Plan, in each case satisfactory to the Bank and the Borrower, which defines the scope of activities, implementation arrangements, environmental and social safeguards arrangements and disbursement arrangements for the activities under Part 4 of the Project.	Before disbursement for Part 4 of the Project.

3. Schedule 2, Section I.A.	The Borrower shall, through MPW, shall maintain until completion of the Project the Project Management Unit with staffing and terms of reference satisfactory to the Borrower and the Bank. The PMU shall be supported by (i) Core Team Consultants and (ii) Design and Supervision Consultants, in each case with terms of reference acceptable to the Borrower and the Bank.	Core Team Consultants: within 90 days after the Effectiveness Date. Design and Supervision Consultants: before the first civil works contract for WP-1 is signed.
4. Schedule 2, Section I.B.	The Borrower shall implement the Project in accordance with the Project Management Manual and the Project Implementation Plan.	During implementation.
5. Schedule 2, Section I.C.	The Borrower, through DGH, shall ensure that the Project is carried out in accordance with the provisions of: (a) the Environmental and Social Management Framework, which includes the Land Acquisition and Resettlement Policy Framework and the Environmental Codes of Practice, and (b) each Land Acquisition and Resettlement Action Plan. The Borrower, through DGH, shall ensure that each contract for civil works for each Sub-Project and to be financed out of the proceeds of the Loan and each civil works contract for each Linked Sub-Project shall include the obligation of the respective contractor to implement and monitor and evaluate: the actions required by Environmental Codes of Practice and the Land Acquisition and Resettlement Action Plans for such Sub-Project and such Linked Sub-Project, as the case may be. The Borrower, though DGH, shall take all measures necessary on its part to regularly collect, compile, and submit to the Bank, as part of the Project Reports, information on the status of compliance with the Environmental and Social Safeguards Management Framework, the Environmental Codes of Practice, the Land Acquisition and Resettlement Policy Framework, and the Land Acquisition and Resettlement Action Plans.	During implementation.
6. Schedule 2, Section I.B.	DGH shall prepare and discuss with the Bank the detailed designs, schedule, supervision arrangements and budgets for each of WP-2 WP-3; revise each of WP-2 and WP-3 in agreement with the Borrower and the Bank as necessary; and thereafter implement each of WP-2 and WP-3 in a manner satisfactory to the Borrower and the Bank.	During implementation.

STRATEGIC CONTEXT

A. Country Context

1. *Status of Indonesian economy*. Indonesia has made remarkable progress over the past decade in terms of macroeconomic and political stability. Macroeconomic performance since the late 1990s has seen consistent output growth and a rapid decline in external imbalances. Indonesia's economy continued to build momentum throughout 2010, with growth ending the year above pre-crisis levels.[1] Indications are that the previous year's downturn was short-lived and the impact of the downturn on people's access to work and welfare was not only relatively limited but had also largely waned by year end. Economic growth rose to 6 percent in 2010 with scope for growth to average 7 percent by mid-decade despite the weaker global outlook. With this positive near-term outlook, the challenge now is to maintain this momentum into the medium term and ensure that economic growth leads to improved living standards for all Indonesians. Successful implementation of priority infrastructure projects will be essential for Indonesia to emerge as a strong middle income country in the coming decade. To this end the government's program highlights the need for investments to enhance efficiency and reduce spatial disparities in access (quantity and quality) to infrastructure and public services.

B. Sectoral and Institutional Context

2. *Roads and transport demand*. Since roads account for the majority of domestic freight (70 percent) and interurban passenger land travel (82 percent), their coverage and condition are crucial to the goals of economic growth and social development.[2] In 2009, the Indonesian road system totaled 372,173 kilometers, of which 34,629 km (9 percent) were classified as National roads, 48,681 km (13 percent) as Provincial roads, 264,326 km (71 percent) as District roads, 23,469 km (6 percent) as Urban roads and 688 km (less than 1 percent) as Other (including Toll Roads).[3] Overall density of the road network, at 14.95 km/10,000 population, ranks well against other countries in Asia, but the spatial density of 0.185 km per square km appears low and is most likely a reflection of the regional disparities in population density and other characteristics that exist among the six main island groups. Recent analysis suggests that when viewed against economic activity, the density of the network may be adequate in sparsely populated areas but inadequate in areas of high economic activity, such as Java, Sumatera and South Sulawesi.[4]

3. The demand for road transport is rising rapidly, with traffic growth particularly evident in the six metropolitan areas and along regional routes. Indonesia's motor vehicle fleet doubled from 41 to 81 million vehicles over the past five years.[5] About one-third of all vehicle travel is made on the national road network, accounting for an estimated 79.6 billion vehicle-kms in 2009[6]. Road travel speeds remain low, averaging 42 km/hour on the national road network.

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[1] *Indonesia Economic Quarterly: Building Momentum, The World Bank, March 2010.*
[2] *Making the New Indonesia Work for the Poor, The World Bank, 2007.*
[3] *National Road Sector Assessment and Strategic Plan 2010-2014, Directorate General of Highways, MPW, November 2009.*
[4] *Application of Medium-Term Expenditure Framework & Performance Based Budgeting in Directorate General of Highways Indonesia, Final Report, February, 2010.*
[5] *Of this total, motor vehicles increased 56 percent to 21 million, and two-wheelers by 130 percent to 60 million.*
[6] DGH estimate

These low speeds reflect poor geometric road standards in hilly terrain, combined with poor traffic management, and the proximity of ribbon development and other land use issues along the road rights of way. To keep pace with the rising demand, road capacity, traffic management and land use management improvements are urgently required. Road safety is a particular concern as traffic accidents are one of the highest causes of death in Indonesia, and Indonesia has one of the highest levels of accidents among countries in ASEAN.

4. The government recognizes the challenge of providing adequate road coverage and standards, and has been taking action to fill the gap. Over the past five years, the budget for national roads rose steeply to IDR 17 trillion in 2009, which is nearly four times higher than the 2004 level of IDR 4.5 trillion. The Directorate General of Highways (DGH) has overseen the addition of 8,300 km of national roads (by reclassification and improvement of sub-standard roads), increased capacity by more than 10 percent, and kept the overall condition of national roads to 86 percent in good and fair condition in 2009, about the same level as in 1984. However within this overall strong performance there remain issues of uneven coverage across provinces, a relatively short life of road treatments resulting in comparatively heavy treatment requirements, and high average costs for both preservation and development works.

5. These improvements on the ground have been accompanied by a number of fiscal and legislative reforms. These include: (i) preparation of a new Land Acquisition Law that would consolidate recent efforts to improve land acquisition processes; (ii) the implementation (in-progress) of a multi-year Performance Based Budgeting (PBB) and Medium-Term Expenditure Framework (MTEF) for the 2010-2014 period; (iii) creation of fiscal space through the reduction of the fuel subsidy in 2005 and 2008; (iv) amendment of the Traffic and Road Transport Law No. 22/2009 to provide for the establishment of a road preservation fund; (v) passage of legislation to set criteria for Public-Private Partnership (PPP) projects and create a Risk Management Unit in the Ministry of Finance (MoF) to foster private sector participation in infrastructure; (vi) separation of the regulatory and service delivery functions of toll roads through the creation of a new regulatory body; (vii) devolution of the responsibility for managing provincial and district roads to local government; and (viii) strengthening of procurement procedures and the Ministry of Public Works (MPW) through improved e-procurement systems and other procedural changes. Many of these developments reflect a strong collaborative approach among the various ministries involved in policy and oversight, and the key development partners.

6. The west coast road corridor is one of three North - South corridors that traverse Sumatera. A number of its road sections are relatively narrow, 4.5 meters wide, and have reached their capacity. And yet, the West Coast of Sumatera is undergoing an agricultural and industrial transformation. In addition to rice plantations, many areas from Lampung province in the South to North Sumatera province in the North, are being developed for plantation crops such as palm oil, tea, resin, rubber, coffee, coconut, and cinnamon. There are also fisheries and coal production in the area. Finally, West Sumatera also has huge development potential in the tourism sector.

7. *Disaster Risk Management.* The provinces on the western coast of Sumatera, including Aceh, North Sumatera, West Sumatera, Bengkulu and Lampung, are identified as vulnerable to earthquakes. The September 2009 earthquake in West Sumatera caused significant damage to road infrastructure. The total value of damage to road infrastructure was estimated at IDR 294 billion (around $33 million)[7]. While most of the damage occurred at the district road level, the contribution of the damage to national roads was relatively high (20 percent of the total value of damage). More importantly the collective damage to national, provincial and district roads interrupted connectivity and isolated many remote areas for several days.

8. This recent experience underscores the need to consider the above risks and adopt appropriate risk mitigation measures. The Government recently included disaster management in its priority program in the Medium-Term Development Plan for 2010-2014 and subsequently launched the National Action Plan for Disaster Risk Reduction (NAP-DRR) for 2010-2012. The NAP-DRR presents an opportunity to shift disaster management spending from ex-post rehabilitation of damaged assets to ex-ante activities (building resilience in the regular investment program). Achievement of the latter will not only require the adoption of road construction and network designs that provide for structural and spatial resilience, but also the strengthening of institutions in the areas of enhanced preparedness, risk mitigation and disaster management.

C. Higher Level Objectives To Which The Project Contributes

9. The objective of the Government's strategy in the road sector is to increase the effective use of selected sections of national roads along the Western Sumatera Corridor by reducing road user costs. The strategy also aims to address the disparity in road density between the populated regions of the west and the remote regions of the east and north, and the poor condition of the local road network compared with the national network. The proposed project, which would support the development of a western corridor route on Sumatera through improvement and capacity expansion of existing roads, will contribute to this objective. The project would also make use of some of these reforms, such as e-procurement and improved procedures for land acquisition. Finally, as the area is prone to earthquakes and landslides, the project would also incorporate a contingency scheme for disaster preparedness, one of the first operations to take advantage of this modality in the road sector.

10. The project is consistent with the World Bank's Country Partnership Strategy (CPS) for Indonesia FY2009-2012, *Investing in Indonesia's Institutions for Inclusive and Sustainable Development*. This support falls under Core Engagement 2 for Infrastructure, which focuses on support to institutions, both public and private, in finding ways to bridge the financing gap in infrastructure in a sustainable way, while strengthening accountability and the capacity of those institutions to deliver better outcomes. For roads, the CPS aims to strengthen the institutional framework at the national and regional levels, including fiduciary, operational, technical, management systems and capacities in support of Government efforts to improve road quality. The proposed Project would contribute to the higher goal of improved connectivity and integration of the national economy, thereby enhancing Indonesia's resilience and competitiveness.

[7] West Sumatra Damage And Loss Assessment Report, October 2010

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

11. 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. Project Beneficiaries

12. Project beneficiaries will be road users in participating provinces, districts and towns in the four provinces included in the WINRIP region (North Sumatera, West Sumatera, Bengkulu and Lampung). Direct beneficiaries of the project include people who live in the vicinity of the project area who directly benefit from the improvement of the road sections financed by the project. The project road sections traverse 12 districts[8] with a total population of more than 4 million[9]of which around half are women. In addition, the betterment and maintenance of roads will create employment for people.

C. PDO Level Results Indicators

13. The key performance indicators for the above development objective are:

(i) Average passenger travel times - reduced by at least 20% on project roads;
(ii) Average vehicle operating cost for a typical car, bus and heavy truck - reduced by at least 5%, 8%, and 10% respectively, on project roads;
(iii) Increase of AADT as per traffic forecast.

III. PROJECT DESCRIPTION

A. Project Components

14. The IBRD Loan amount is US$250 million. The project has four components:

15. ***Component 1: Betterment[10] and Capacity Expansion of National Roads (US$314.9 million).*** Betterment (including base course strengthening, minor widening, providing a new asphalt wearing course and improving drainage); and capacity expansion of approximately 715.6 kilometers of National Roads, including replacement of approximately 194 meters of bridges.

16. ***Component 2: Implementation Support (US$16.0 million).*** Providing support to the MPW for the implementation of the civil works, including: (a) provision of Core Team Consultants and Design and Supervision Consultants and road safety audits; and (b) Project management support and technical audits.

[8] Lampung Barat, Pasaman, Pasaman Barat, Agam, Mokomuko, Tapanuli Tengah, Pesisir Selatan, Padang Pariaman, Tanggamus, Bengkulu Selatan, Bengkulu Utara, Lampat Barat.
[9] 2010 population estimated using the 2000 population census and an annual population growth rate of 1.136%
[10] In Indonesia, "betterment" typically involves the base course strengthening, minor widening, providing a new asphalt wearing course, and improving drainage. In most cases, the road already has an asphalt pavement.

17. ***Component 3: Road Sector Institutional Development (US$1.0 million*).** Providing technical assistance and capacity building support to strengthen disaster risk mitigation in the road sector, including capacity building support for the new environment/risk mitigation and road safety unit of DGH capacity to conduct disaster risk assessments and planning, risk mapping of land-slides, coastal erosion, earthquake and floods, and analysis of alternative designs for road segments that pass through critical environmental assets and vulnerable areas.

18. ***Component 4: Contingency for Disaster Risk Response ($0).*** Providing preparedness and rapid response to disaster, emergency and/or catastrophic events, as needed. This provisional zero dollar component will be added under this project to allow for rapid reallocation of loan proceeds from other components under streamlined procurement and disbursement procedures.

B. Project Financing

19. *Lending Instrument.* The Project will be financed with a Specific Investment Loan (SIL). The Borrower has selected an IBRD Loan with a Variable Spread Option, final maturity of 24.5 years including a grace period of 9 years and annuity principal repayment, at a rate equal to LIBOR for the Loan Currency plus the Variable Spread.

20. *Project Financing Table.* Table 1 indicates the proposed project cost with financing sources.

C. Lessons Learned and Reflected in the Project Design

21. *Readiness for Implementation.* The experience in Indonesia of past and ongoing roads projects shows that implementation delays were mostly caused by slow procurement processes. In the on-going Strategic Roads Infrastructure Project (SRIP) delays in the engagement of consulting services was the main cause of overall implementation delays. The same problem was encountered in the preparation of WINRIP with delays in contracting the preparation/design consultant. Although the part of the problem related to the size and composition of procurement committees has been addressed at a systemic level through the Infrastructure Development Policy Loan (IDPL) series, delays in the procurement of consultant contracts persist. Timely engagement of the implementation support consulting services is the most critical issue to confirm the readiness for implementation. As such, preparation of the Request for Proposal package for these services must begin early to ensure the requisite consulting services are in place in a timely manner.

22. *Quality of Engineering Designs.* In the past, there have been some concerns over the poor quality of engineering designs because road sections were bid based on "final designs" that were less than full detailed engineering designs. The professional review of engineering designs introduced in SRIP has improved the quality of design, and will continue in WINRIP. Detailed engineering designs for WINRIP are to meet the same quality standards and specifications, in terms of detailed content and presentation, as those recently prepared for the Eastern Indonesia National Roads Improvement Project (EINRIP).

Table 1: Proposed Project Cost by Components (US$ million)

No	Component	Estimated Project Cost	Estimated GOI Share	Estimated IBRD Share
1	**Betterment and Capacity Expansion of National Roads [2]**	**314.90**	**94.50[1]**	**220.40[1]**
	(a) WP-1 Civil Works Program	81.64	24.49	57.15
	(b) WP-2 Civil Works Program	150.46	45.14	105.32
	(c) WP-3 Civil Works Program	76.64	22.99	53.65
	(d) Contingency	6.17	1.85	4.32
2	**Implementation Support**	**16.00**	**0**	**16.00**
	(a) Core Team Consultant	5.00	0	5.00
	(b) Design and Supervision Consultant	10.00	0	10.00
	(c) Incremental Operating Costs including technical audits	1.00	0	1.00
3	**Road Sector Institutional Development**	**1.00**	**0**	**1.00**
	Capacity Building for DGH Environment/Risk Mitigation and Road Safety Unit	1.00	0	1.00
4	**Contingency for Disaster Risk Response[3]**	**0**	**0**	**0**
5	**Unallocated [4]**	**18.10**	**5.50**	**12.60**
	TOTAL	**350.00**	**100.0**	**250.0**

1/ The cost share is 70% IBRD and 30% GOI for component 1 and 100% IBRD for component 2, 3 and 4.
2/ Costs exclude cost of land acquisition and resettlement as well as taxes which are funded directly by the Government.
3/ Contingency for Disaster Risk Response will be kept zero while the Government can utilize project budget for rapid response with agreed conditions subject to reallocation or additional finance later.
4/ Unallocated consist of mainly physical and price contingencies for civil works.

23. *Quality of Construction*. Quality of works has been an issue in past projects, but largely improved in SRIP by (a) designation of the Design and Supervision Consultants as the "Engineer", and (b) implementation of the enhanced monitoring aspects of the Anti-Corruption Action Plan. In addition to these improvements, WINRIP quality assurance measures will be strengthened through a system of enhanced independent technical audits, over and above those included in other projects.

24. *Governance Enhancement*. Past projects in Indonesia and elsewhere have shown that anti-corruption strategies that rely on either the addition of multiple layers of review and/or the bypassing of governmental processes are often unsuccessful. Approaches that address systemic problems in government systems and enhance transparency are often more successful and sustainable. This Project would explore the use of computerized reporting and tracking systems,

e-procurement, and a well managed complaints handling mechanism for mitigating procurement related corruption and collusion risks.

25. *Supervision-friendly design*. Past road projects such as EIRTP-1 and 2 included many road segments scattered over a wide geographical area. This scattering complicates supervision and increases oversight costs. WINRIP has adopted a corridor approach, whereby segments are grouped and located in sequence, thereby easing technical supervision and third party monitoring.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

26. The Government has established an umbrella Steering Committee (SC) to guide and oversee the development of road infrastructure and road traffic and transport. The SC reports to the Ministerial-level Committee on Policy for the Acceleration of Infrastructure Development, which is chaired by the Coordinating Minister for the Economy, through the Sub-Committee on Planning and Investment. The Sub-Committee is chaired by Bappenas' Deputy for Infrastructure, who also chairs the roads steering group. The Steering Committee has appointed the Directorate General of Highways (DGH) within MPW as the Executing Agency for the Project.

27. A number of organizations will be involved in the Project. These include Bappenas, Ministry of Finance (approval of Project's budget, administration of special account and loan account), the local planning bureau at province level (coordination of provincial activities), the Local Environmental Impact Management Agency (environmental overview), and local communities and non-governmental organizations (represent local interests as stakeholders, assist in minimizing corruption and attend bid processing).

28. The MPW is the executing agency through the DGH. The Directorate of Planning (DOP) has recently established a Sub-Directorate dedicated to the preparation and implementation of Foreign Loan Projects and will be responsible for the day to day activities and will be the Project Management Unit (PMU). Direct responsibility for project implementation will be shared between the regional DGH's representative (Balai) responsible for each road. The Project Organization Chart is shown in Figure A3.1 in Annex 3.

29. The DOP and its PMU will be supported by Core Team Consultants (CTC), who will assist with all aspects of project and financial management, monitoring, evaluation and reporting, and ensure that these functions are undertaken in a timely fashion. The CTC will assist with detailed project preparation for Work Programs (WP) 2 and 3 of the Project, and assist in the management of the Design and Supervision Consultants (DSCs) in the detailed design of these programs. The CTC will liaise closely with DSCs and other consultants employed under the Project.

30. The DSCs will be appointed by DGH to assist the immediate Project Managers, appointed by the central Government, in all aspects of the design, procurement and implementation of the civil works. The DSCs will be the supervision engineer for all works

contracts. The DSCs will have site offices to provide full regional support in each Project's Balai. The terms of reference for CTC and DSCs are available in the project files as well as the Project Implementation Plan and Project Management Manual.

B. Results Monitoring and Evaluation

31. DOP will monitor the overall performance of the Project and its implementation, including: (a) the extent to which project objectives are being achieved; (b) the administrative, physical and financial progress of implementation of the project components; and (c) the extent to which required implementation procedures are being complied with. MPW is currently developing an IT based National Road Project Monitoring System (Integrated SiPP[11]) to monitor financial, technical and physical progress of national road projects, which is scheduled to be implemented from the end of 2011. WINRIP will be one of the projects to pilot SiPP.

C. Sustainability

32. The sustainability of Project investments will be determined by the quality achieved in the design and construction of the roads. Recent analysis in support of MTEF further indicates that sufficient funding is available in the DGH budget for maintenance of national roads provided that optimal maintenance practices are pursued. The recent and current allocation of resources to the road preservation program has been strong (at IDR 200 million/km/yr or US$ 20,000/km/yr this is high relative to many other countries). The condition of the national road network is fairly good. DGH is currently preparing the first 3-year rolling budget and program for the 2011-13 period. Placing budgeting on a three-year rolling basis under an MTEF is intended to improve the predictability of funding allocations for the road sector. The results of the economic evaluation show that the project is economically viable and that benefits are likely to increase over time (paragraph 54).

V. KEY RISKS AND MITIGATION MEASURES

33. Project investments are straightforward and the project's technical approach is based on standards that are built on existing Government programs. Inadequate initial engineering road designs have led to cost overruns in past projects. DGH has emphasized on the preparation of high quality designs by the PPC, and the Bank conducted an independent design review for the Work Program 1 (WP-1) to ensure satisfactory quality. WP-2 and 3 designs will be ensured by CTC and reviewed by the Bank.

34. Project implementation requirements are similar to previous and ongoing projects with reasonably well performing Implementing Agencies (IA). There is, however, still a risk due to the lack of capacity in the PMU and insufficient coordination within the IAs. Procurement relies on procurement committees which comprise part-time members; this may cause delay and

[11] SiPP or *Sistem Pemantauan Proyek* (Project Monitoring System) compiles and presents managerial reports such as contract scheduling, payment, and issues reported or complaints generated from projects. In the future the system will be integrated with *Simpajatan* or *Sistem Pengawasan Jalan dan Jembatan* (System for Roads and Bridges Monitoring), a system which monitors technical progress, to allow better integration of information for managers and policy makers.

unsatisfactory quality. The PMU will be supported by the project preparation consultants (PPC), project management consultants (Core Team Consultants, including assistance in procurement, and Design and Supervision Consultants) to help and facilitate technical aspects of the business processes. MPW is currently establishing procurement service units, ULPs, at central and Balai levels to enhance procurement practices and the e-tendering system. The enhancement and sustainability of quality PMU staff needs to be monitored during implementation support. The Anti-Corruption Action Plan (ACAP) is enhanced by lessons from the past and ongoing Bank supported projects (Annex 8).

VI. APPRAISAL SUMMARY

A. Economic Analysis

35. Economic evaluation was carried out using the Highway Development and Management tool, HDM-4 version 2.05. The results of the economic analysis for road and bridge works are presented in Table 7.1, Annex 7. All sub-projects are economically viable; most have an EIRR of over 30 percent. The overall WINRIP NPV is over US$365 million and the overall EIRR is 29.9%.

36. A sensitivity analysis was carried out with three scenarios: (i) a 20% increase in capital costs; (ii) a 20% decrease in road user benefits; and (iii) the combined effect of both. Results confirm that the economic justification for the project is robust. While most sub-projects remain viable, three sub-projects fall just below 12% under scenario 3. The overall EIRR under scenario 3 is still over 21.7 percent.

B. Technical

37. Civil works of the project consist of betterment and capacity expansion to bring the selected road sections and bridges to the required national roads standards. Such improvements include widening of the carriageway and provision of shoulders, improvements to drainage, minor improvements to alignment, and two-layer asphaltic concrete (AC) resurfacing. The project scope comprises 21 road sections and 4 bridges that add up to approximately 715 km of roads, including 194 meters of bridges. A number of the road sections are relatively narrow with an average width of 4.5 meters, and have reached their capacity. The road sections will be designed to a standard of either 7 meters carriageway plus 2 x 2 meters shoulders, or of 6 meters carriageway plus 2 x 1.5 meter shoulders. Table 2 presents a summary of the civil works by type of intervention.

Table 2: Summary of Civil Works by Category

Type of works	Length	Cost (US$ million)*	US$/km
Betterment (km)	462.60	172.29	372,436
Capacity Expansion (km)	252.80	132.48	524,042
Bridge (meter)	194	3.97	20,895/m
Total	****715.59 km**	**308.74**	

** Contingency costs not included - ** including 194 meters of bridges*

38. Generally, the works pose no significant technical issues, although the recent major earthquakes show that designs need sensitivity to minimize the risks of damage in case of a major earthquake, particularly landslides. The significant factors will be timely engagement of the key consultancy services and the agreement of the Ministry of Finance to ensure funds are available for the full implementation period of this contract. Close monitoring of construction quality by the Design and Supervision Consultant (DSC) and proactive schedule control of PMU, supported by the Core Team Consultant (CTC), will continue to be a key factor for implementation.

C. Financial Management

39. The financial management capacity assessment notes that DOP has considerable prior experience in managing Bank-financed projects and sufficient capacity to implement the Project and financially account for it. Such capacity is however variable in the provincial Public Works offices. The internal control environment in the implementing agencies is relatively weak. Financial management reforms are gradually making headway to improve the overall country control environment. However, as far as this project will rely on financial management systems and procedures of the Government, fiduciary risks will still arise.

40. A Financial Management Action Plan has been developed in consultation with DOP to help mitigate the identified financial management risks. This action plan includes strengthened internal controls through regular technical and financial audits of Project activities; strengthened payment validation procedures to reduce risks of fraud; segregation of some financial functions from the rest of Project management to maintain checks and balances; documentation of Project and financial management procedures in a manual to guide Project staff, and steps to train Project staff in financial management procedures. This assessment has concluded that, after the implementation of the actions stated in the Financial Management Action Plan, the Project will satisfy the Bank's financial management requirements as stipulated in OP/BP 10.02.

D. Procurement

41. Procurement activities will be carried out by the DGH of the MPW. The Ministry has in recent years undertaken several procurement reforms including: (i) introduction of e-procurement; (ii) establishment of Procurement Service Units (ULP); (iii) adoption of a harmonized ICB bidding document in line with the Bank's Standard Bidding Document; and (iv) carrying out various anti-corruption and transparency initiatives. These are supported in part by the Bank-financed IDPL series.

42. Procurement will be carried out in accordance with the existing institutional structure of DGH: consultancy services by procurement committees centrally located in Jakarta; and works contracts by DGH's Public Works Offices and their procurement committees located at the provincial level in the participating provinces in Sumatera. DGH, through DOP, will manage and coordinate the various implementing units at the central and provincial level. Procurement will be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004, revised in October 2006 and May 2010; "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised

in October 2006 and May 2010; and in accordance with the provisions stipulated in the loan agreement.

43. A procurement assessment has been carried out and has concluded that DGH has the basic capacity to carry out procurement activities related to the proposed project, with assistance from outside consultants. Risks identified include: (a) bulk of the procurement consists of large packages of significant strategic value; (b) significant difficulties in selection of consultants in terms of weaknesses in the evaluation process and extreme delays; (c) although many staff at the Central and Provincial level are experienced with donor-funded projects, there is still uneven understanding of the principles of the Bank's Procurement Guidelines, and in particular Selection of Consultants and large ICB Procurement; (d) the procurement of works will be conducted simultaneously, which will stretch the coordination between the PMU and the PIUs, and the PMU and the Bank; (e) ex post review of EIRTP-2 shows an inadequate filing system; and (f) the general procurement environment is weak and significant cases of fraud and collusive practices in past projects in the sector, leading to numerous investigations, re-bidding and cases of mis-procurement.

44. Risk mitigation measures agreed are: (a) a Procurement Plan, with semi-annual updates; (b) procurement training during project launch; (c) establishment of an Anti-Corruption Action Plan; (d) as interim to the new e-procurement, the existing semi e-procurement system can be used as an additional measure to advertise and provide bidding documents; (e) provision of support to the PMU and procurement committees through the core team consultant (CTC); (f) an updated Project Management Manual (PMM) from SRIP; (g) inclusion of clarifications on NCB procedures in the 1egal documents and PMM respectively; (h) designation of experienced staff for procurement committees and the Project Management Unit; and (i) a strengthened filing system.

E. Social

45. The social and land acquisition review of project components was carried out during project preparation to analyze direct and indirect social risks and impacts likely to be caused by project activities. The overall social impact of the Project is expected to be positive, as it will improve the travel conditions and times for a significant number of beneficiaries. Localized negative social impacts will be experienced during construction due to: (a) disruption to travel; (b) land acquisition and resettlement associated with capacity expansion and bridge replacement; and (c) possible exposure to HIV/AIDS due to the significant numbers of migrant construction workers. The project triggers one social safeguard policy, namely Involuntary Resettlement (OP/BP 4.12). A Land Acquisition and Resettlement Policy Framework is included in the Environmental and Social Management Framework (ESMF).

46. *Land Acquisition and Resettlement Policy Framework (OP4.12.:* The betterment, and particularly the capacity expansion, sub-projects will require some land acquisition and resettlement activities. To ensure compliance with Indonesian Regulations and the World Bank's Involuntary Resettlement policy OP 4.12, DGH prepared a Land Acquisition and Resettlement Policy Framework (LARPF). The Framework has been consulted and adopted by DGH and is satisfactory to the Bank.

47. *Land Acquisition and Resettlement Actions Plans (LARAPs).* LARAPs are prepared for all the sub-projects included in WP-1 by the Local Government at the district level and are in compliance with LARPF and approved by DGH and the Bank. The cleared LARAPs are signed by the relevant authority (District Authority) as a commitment for their implementation. For sub-projects under WP-2 and WP-3, the framework will be used as a guide to prepare LARAPs where necessary.

48. *Resettlement Monitoring.* LARAP implementation will be monitored by local Monitoring Teams at the district level on a monthly basis. Project wide monitoring and reporting will be supervised by DOP. Monitoring information on each sub-project will be shared with the World Bank for review and comment. Project Reports submitted to the World Bank will include consolidated information on the status of LARAPs. The terms of reference for monitoring consultants will be reviewed by the Bank. At the time of the Mid-term Review and at Project closure, an independent consultant will review LARAP implementation based on terms of reference agreed with the Bank.

49. *Safeguards documents* have been disclosed in accordance with the Bank's Disclosure Policy. The ESMF, the LARPF and the four LARAPs for the sub-projects included in WP-1 sub-projects have been disclosed at the World Bank's Infoshop and on the MPW web site.

50. Construction contracts include clauses requiring contractors to allow their workers to attend education sessions where HIV/AIDS awareness brochures and condoms will be distributed. This activity will be financed through the contracts and will be targeted to an initial few contracts to see the results before expanding further.

F. Environment

51. Adverse environmental impacts associated with the civil works described in Annex 2 are expected to be limited to construction related impacts. These are expected to be short lived, occurring mostly along the alignment of the selected road segments, with some impacts potentially occurring at offsite locations such as quarry sites and spoiled material disposal sites. These can either be avoided altogether through careful designs and good construction practices, or reversed or otherwise effectively mitigated as they occur during construction by use of environmental codes of practice (ECOP) that will be included in the civil works contracts.

52. The project is not expected to have longer term direct, induced or cumulative impacts on the environment, including on natural or critical natural habitats. As per the requirements of Environment Assessment OP4.01, the project has been assigned EA Category "B". Physical cultural resources (in the form of graves and cemeteries) will be affected and hence the project also triggers Physical Cultural Resources OP4.11.

53. Environmental screening for sub-projects in WP1 has been completed. Based on this screening, and through the adoption of COP in the civil works contracts, these sub-projects will meet the requirements of Environmental Assessment OP4.01.Preliminary environmental screening for sub-projects in WP-2 and WP-3 has been completed and it has been determined that a full Environmental Assessment will not be required; adoption of the ECOP will suffice for compliance with OP4.01. DGH has prepared an Environmental and Social Management Framework (ESMF) to manage the sub projects in WP-2 and WP-3. The ESMF contains the necessary screening processes and requirements for compliance with both Indonesia's Amdal and the World Bank's safeguards requirements. It also contains the ECOP, as well as institutional arrangements, including capacity building measures and the necessary budgets. The ESMF is acceptable to the Bank, and has been disclosed both in the InfoShop and locally in Indonesia.

Annex 1: Results Framework and Monitoring

INDONESIA: WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT

Results Framework

Project Development Objective: The development objective is to increase the effective use of selected sections of national roads along the Western Sumatera Corridor by reducing road user costs.											
PDO Level Results Indicators*	**Core**	**Unit of Measure**	**Baseline (2010)**	**Cumulative Target Values****					**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR5**			
Indicator One: Average passenger travel times reduced by at least 20% on project roads. (i) For light vehicles with base year Speed of 51 km/h (ii) 46 km/h for large buses (iii) 40 km/h heavy trucks	☐	Km/h	0 %	---	---	5 %	---	20 %	Mid-term and ICR	Travel speed survey	PMU/CTC
Indicator Two: Average vehicle operating cost for a typical car, bus and heavy truck reduced by at least 5%, 8%, and 10% respectively, on project roads (i) For light vehicles with base year Vehicle Operating Cost of $US0.19 per veh-km (ii) $US0.35 veh-km for large buses (iii) $US0.65 veh-km for heavy trucks	☐	$US/km	0 % 0% 0%	---	---	3 % 5% 7%	---	5 % 8% 10%	Mid-term and ICR	Road condition and travel speed surveys. And use of HDM-IV VOC estimation Model	PMU/CTC
Indicator Three: Increase of AADT on project road sections	☐	AADT	PAD-Annex 7					AADT Increases	ICR	Traffic surveys	PMU/CTC

as per forecast								as per forecast			
PDO Level Results Indicators*	**Core**	**Unit of Measure**	**Baseline (2010)**	**Cumulative Target Values****					**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**
INTERMEDIATE RESULTS											
Intermediate Result (Component One): Betterment and Capacity Expansion of National Roads											
Intermediate Result indicator One: Number of kilometers of improved national roads in the project region as planned.	☐	km	0 km	50 km	100 km	300 km	500 km	715 km	Semi-Annually	Reports from PMU	PMU/CTC
Intermediate Result indicator Two: Number of meters of improved bridges	☐	meter	0 m	0 m	100 m	130 m	160 m	194 m	Semi-Annually	Reports from PMU	PMU/CTC
Intermediate Result (Component Two): Implementation Support											
Intermediate Result indicator One: Satisfactory completion of technical audits for all road projects of component 1	☐		0 %	20 %	40 %	60 %	80 %	100 %	Semi-Annually	Reports from PMU	PMU/CTC
Intermediate Result indicator Two: Satisfactory completion of road safety audits for all road projects of component 1	☐		0 %	20 %	40 %	60 %	80 %	100 %	Semi-Annually	Reports from PMU	PMU/CTC
Intermediate Result (Component Three): Road Sector Institutional Development											
Intermediate Result indicator One: % of Environment unit staff trained and capacitated to mitigate disaster risk related to road network			0%	20 %	40 %	50%	75%	100%	Semi-Annually	Reports from PMU and Bank Supervision	PMU/CTC

* Target values should be entered for the years data will be available, not necessarily annually (see http://coreindicators for more details)
** Use cumulative target values only if relevant.

Annex 2: Detailed Project Description

1. The Western Indonesia Road Improvement Project (WINRIP) is intended to finance a part of the DGH investment program for national roads. The scope of this Project is national roads in Western Indonesia on Sumatera Island. This project is conducted in parallel with a similar project with the same objectives financed by AusAID in Eastern Indonesia (The Eastern Indonesia Road Improvement Project, EINRIP). WINRIP covers four provinces in Sumatera (Lampung, West Sumatera, Bengkulu and South Sumatera) with a total population of around 27 million (2010).

2. Western Indonesia, in particular the island of Sumatera, is at higher risk of experiencing natural disasters. Damage to national, provincial and district roads during the recent earthquake in Western Sumatera has created significant disruption to network connectivity and has isolated many remote areas.

3. The project will improve the National road network in Sumatera and, where desirable, raise the road standard to that set by DGH. Works under the IBRD assisted component of WINRIP concentrate mainly on road betterment, road capacity expansion, and bridge replacement or repair for selected sections of National roads located along the western corridor of Sumatera**.** This corridor connects the city of Padang to major towns along the west coast (Bukittinggi, Sibolga and Bengkulu) and to Medan in the northeast and to Pekanbaru in the center of the island. The project has four components.

4. ***Component 1: Betterment[13] and Capacity Expansion of National Roads (US$314.9 million).*** A number of the road sections along the Sumatera Western Corridor are relatively narrow with average width of 4.5 meters, and have reached their capacity. The road sections will be designed to a standard of either 7 meters carriageway plus 2 x 2 meters shoulders, or of 6 meters carriageway plus 2 x 1.5 meter shoulders. Such improvements include widening of the carriageway and the provision of shoulders, improvements to drainage, minor improvements to alignment, and two-layer asphaltic concrete (AC) resurfacing. This component will finance the betterment and capacity expansion of approximately 715.6 km of roads, including 194 m of bridges. The project will improve these roads and bridges to an acceptable standard, suitable to ensure that the national road network provides uniform standards of service and accessibility, and is capable of supporting local and regional development. Table A2-1 lists the sub-projects by work program, province, and length, with indicative costs. Table A2-2 indicates the estimated project cost, along with the financing sources.

[13] In Indonesia, "betterment" typically involves the base course strengthening, minor widening, providing a new asphalt wearing course, and improving drainage. In most cases, the road already has an asphalt pavement.

Table A2-1: Sub-Project Roads and Bridges

No.	Sub-project	Km	Province	IDR billion	US$ million	US$ mil./km
1	Krui – Biha	25	Lampung	148,668	16.52	0.661
2	Padang Sawah – Simpang Empat including the Air Gadang Bridge	40.9	West Sumatera	207,390	23.04	0.563
3	Manggopoh – Padang Sawah	32	West Sumatera	152,435	16.94	0.529
4	Ipuh - Bantal	42.4	Bengkulu	226,275	25.14	0.593
WP-1 Sub-Total		**140.30**		**734,768**	**81.64**	**0.582**
5	Sp Rampa - Poriaha	11.1	North Sumatera	55,126	6.13	0.552
6	Ps. Pedati - Kerkap	25	Bengkulu	72,018	8.00	0.320
7	Indrapura - Tapan	19.5	West Sumatera	96,921	10.77	0.552
8	Bts Kota Pariaman - Manggopoh	46.8	West Sumatera	183,268	20.36	0.435
9	Rantau Tijang – Kota Agung	42	Lampung	149,831	16.65	0.396
10	Simpang Empat – Sp. Air Balam	61.7	West Sumatera	241,617	26.85	0.435
11	Bantal - Mukomuko	50.1	Bengkulu	157,820	17.54	0.350
12	Kambang - Indrapura	55.2	West Sumatera	171,948	19.11	0.346
13	Sp Rukis – Tj Kemuning	56.3	Bengkulu	225,482	25.05	0.445
WP-2 Sub-Total		**367.70**		**1,354,031**	**150.46**	**0.409**
14	Painan - Kambang	31.5	West Sumatera	118,993	13.22	0.420
15	Sibolga – Bts TapSel	36	North Sumatera	129,228	14.36	0.399
16	Seblat - Ipuh including Air Lalang and Air Guntung bridge	34.5	Bengkulu	110,237	12.25	0.355
17	Sp. Gng Kemala – Pugung Tampak including Way Taau bridge	36.8	Lampung	104,238	11.58	0.315
18	Mukomuko – Batas Sumbar	25.8	Bengkulu	69,233	7.69	0.298
19	Lais - Bintuan	11.6	Bengkulu	37,558	4.17	0.359
20	Lubuk Alung - Sicincin	14.6	West Sumatera	54,557	6.06	0.415
21	Lubuk Alung - Kuraitaji	16.8	West Sumatera	65,788	7.31	0.435
WP-3 Sub-Total		**207.6**		**689,832**	**76.64**	**0.369**
Contingency				**55,530**	**6.17**	**----**
TOTAL		***715.60**		**2,834,161**	**314.91**	**0.440**

*including 194 meters of bridges

Table A2-2: Proposed Project Cost by Components (US$ million)

No	Component	Estimated Project Cost	Estimated GOI Share	Estimated IBRD Share
1	**Betterment and Capacity Expansion of National Roads [2]**	**314.90**	**94.50[1]**	**220.40[1]**
	(a)WP-1 Civil Works Program	81.64	24.49	57.15
	(b)A WP-2 Civil Works Program	150.46	45.14	105.32
	(c) WP-3 Civil Works Program	76.64	22.99	53.65
	(d) Contingency	6.17	1.85	4.32
2	**Implementation Support**	**16.00**	**0**	**16.00**
	(a) Core Team Consultant	5.00	0	5.00
	(b) Design and Supervision Consultant	10.00	0	10.00
	(c) Incremental Operating Costs including technical audits	1.00	0	1.00
3	**Road Sector Institutional Development**	**1.00**	**0**	**1.00**
	Capacity Building for DGH Environment/Risk Mitigation and Road Safety Unit	1.00	0	1.00
4	**Contingency for Disaster Risk Response3**	**0**	**0**	**0**
5	**Unallocated [4]**	**18.10**	**5.50**	**12.60**
	TOTAL	**350.00**	**100.00**	**250.00**

1/ The cost share is 70% IBRD and 30% GOI for component 1 and 100% IBRD for component 2, 3 and 4.
2/ Costs exclude cost of land acquisition and resettlement as well as taxes which are funded directly by the Government.
3/ Contingency for Disaster Risk Response will be kept zero while the Government can utilize project budget for rapid response with agreed conditions subject to reallocation or additional finance later.
4/ Unallocated consist of mainly physical and price contingencies for civil works

5. ***Component 2: Implementation Support (US$16.0 million).*** This component provides consulting services for design and supervision of the civil works in Component 1; management support and technical audits to help improve the quality of construction; support to help reduce corruption and collusion during procurement and implementation; and a series of systematic safety audits of road designs to ensure compliance with road safety standards and regulations, identify road hazards and make remedial treatments for safety improvements.

6. ***Component 3: Road Sector Institutional Development (US$1 million*) providing support to *strengthen disaster mitigation risks in the road sector.*** This component will provide technical support to implement a DGH capacity building plan to: (i) develop a national road map for high risk and resilient road infrastructure; (ii) prepare norms, standards, procedures and criteria (NSPK) for disaster risk management in the road sector; (iii) carry out a multi-level (national, provincial, local) risk analysis focusing on critical road segments, followed by the development of tools for regular monitoring and mitigation procedures; and (iv) implement

technical standards in construction and maintenance of road infrastructure, particularly in the budgeting and contracting processes.

7. The new DGH organization structure includes a new unit 'Environment/Risk mitigation and Road Safety unit''. DGH/MPW intends to provide capacity to this unit to conduct disaster risk assessments and planning to mitigate disaster risks to road infrastructure, including risk mapping of land-slides, coastal erosion, earthquake and floods. The capacity building program will be carried out in three stages (i) preparatory studies (2011); (ii) capacity development in disaster and environmental risk mitigation for key stakeholders covering management, design, implementation and supervision (2011-2012); and (iii) formation and operation of environment and disaster risk mitigation unit to assist the stakeholders in internalizing the mitigation capacity within their respective roles, mandate and functions (2011-2014).

8. ***Component 4: Contingency for Disaster Risk Response ($0).*** A provisional zero dollar component is included under this project that will allow for rapid reallocation of loan proceeds during an emergency, under streamlined procurement and disbursement procedures. In the event of an emergency, the contingent component would be implemented following the rapid response procedures under OP/BP 8.00. In addition to reallocation of funds from other project components, the contingent component may also serve as a conduit for additional funds to be channeled to the project in the event of an emergency.

Annex 3: Implementation Arrangements

1. The Western Indonesia National Roads Improvement Project (WINRIP) is a national level project, executed by national level ministries. The provinces, districts and their respective local governments where the project roads are located have a role, in accordance with the Government's regulations on decentralization, particularly with regard to land acquisition, resettlement and environmental monitoring.

Project Administration Mechanism

2. *Implementing Agency*. The Directorate of Planning (DOP) will be in charge of day-to-day implementation of all components of the project. DOP has recently established a Sub-Directorate dedicated to the preparation and implementation of Foreign Loan Projects which will act as The Project Management Unit (PMU) and will be assisted by full time qualified staff. The PMU will be responsible for day-to-day coordination of all WINRIP activities, with the DGH being ultimately responsible for WINRIP. Project components related to civil works design and implementation will be managed by the Directorate of Implementation Region I (Direktorat Bina Pelaksanaan Wilayah I) within DGH. Standards for technical design, bid documents and quality control will be authorized by the Directorate of Technical Affairs (Direktorat Bina Teknik/Bintek, DTA). Standards, procedures, and guidelines for environmental management and monitoring will be prepared by the Sub-Directorate of Environmental and Road Safety (SubDit Teknik Lingkungan dan Keselamatan Jalan) within DTA, and administered by Regional Environmental Impact Agencies (BAPEDALDA) in each Province. A summary of implementing role and responsibility of each entity is described the project Implementation Plan. Detail of the project implementation organization chart is shown in Figure A3.1.

3. *Project Management*. DGH has established ten Project Implementation Units, PIUs ("*Balai*"), as administrative units located in each region throughout the country, to be responsible for national road project implementation. Each Balai covers two or more provinces and manages the national roads located in those provinces. WINRIP projects are located across four provinces under three Balais (Balai I, II and II). The Balai assigns a Project Manager (*"Satker"*) at provincial level to handle all packages in that province. *Satkers* assign a Sub-Project Manager (*Pelaksana Kegiatan*) for each package. The Balai also assigns a separate Project Technical Manager for design and supervision of national road works called Perencanaan dan Pengawasan Jalan Nasional (PPJN). PPJN will liaise between the Directorate of Technical Affaires, CTC and specific work units for technical audits. WINRIP will be implemented in accordance with this existing arrangement.

4. *Consulting support*. The DOP PMU will be assisted by the Core Team Consultant (CTC) and the Balais will be assisted by Design and Supervision Consultants (DSC). The DSC Central Team which will be responsible for the detailed design and preparation of tender documents for all the works in WP 2 and WP 3. The DSC will provide ongoing support on project management and implementation to the Balais. The Design and Supervision Consultants will establish and maintain representatives in each of Balai I, Balai II (which shall also be the main representative office of the Design and Supervision Consultants) and Balai III. The DSC will also assign a field

supervision team to oversee physical works on site at each subproject. The CTC will review performance of the DSC to ensure effectiveness of site supervision.

5. *Technical and Fiduciary audits*. The Inspectorate General (IG) of the MPW will monitor the fiduciary aspects of the Project and will issue recommendations for sanctions to DGH, as appropriate. IG audits will cover design, bid preparation, procurement and construction. The IG will carry out further investigations in case of strong evidence of criminal wrong-doing. The audit report will be submitted to MPW and the respective Directorates General within MPW. DGH, through its respective implementation directorates, will be responsible for following up on IG's recommendations and must report back to the IG on the actions taken.

6. *Responsibility for Land Acquisition and Resettlement.* Local governments are responsible for financing and implementing land acquisition and resettlement according to agreed policies and for environmental monitoring. MPW will be responsible for ensuring that land acquisition and resettlement has been executed in full prior to the commencement of the works contracts. The local environmental office, Bapedalda will be responsible for monitoring all environmental aspects of implementation. The DSCs responsible for construction supervision on site will provide the local environmental office with a report on environmental related activities. Detailed implementation responsibilities for land acquisition are included in the ESMF.

Financial Management

7. *Financial Management Assessment.* A financial management assessment has been conducted by the Bank, and actions to strengthen DGH's financial management capacity have been agreed upon with DGH. DOP has considerable prior experience in managing Bank-financed projects and sufficient capacity to implement the Project and financially account for it. Such capacity is however variable in the province Public Works offices. The internal control environment in the implementing agencies is relatively weak, which is in part reflected in the relatively high incidence of fraud and corruption problems reported in previous projects in this sector. Financial management reforms are gradually making headway to improve the overall country control environment. However, as far as this project will rely on financial management systems and procedures of the Government, fiduciary risks will still arise. Taking all these factors into consideration, the overall financial management risk of the Project is rated as "Substantial" before mitigation and "Moderate" after mitigation.

8. A Financial Management Action Plan has been developed in consultation with DOP to help mitigate the identified financial management risks. This action plan includes: strengthened internal controls through regular technical and financial audits of Project activities; strengthened payment validation procedures to reduce risks of fraud; segregation of some financial functions from the rest of Project management to maintain checks and balances; documentation of Project and financial management procedures in a manual to guide Project staff; and steps to train Project staff in financial management procedures. This assessment has concluded that, after the implementation of the actions stated in the Financial Management Action Plan, the Project will satisfy the Bank's financial management requirements as stipulated in OP/BP 10.02.

9. *Budgeting.* The project budget will be integrated into the budget of DGH. More details of the budgeting process are available in the PMM.

10. *Internal controls.* In order to strengthen internal controls, the technical and financial capacities of the PIUs (Balai) will be improved through: (a) training for PIUs on project management; (b) training on project design for the planning unit and the consultant; (c) certification from the MPW training unit for all machine and laboratory operators; and (d) training on Project Management Manual (PMM).

11. *Accounting.* The project agencies, DGH, finance unit, Balai II and PIU at the provincial level, will follow government accounting standards and regulations (Government Regulation no. 24, 2005, MoF Regulation no. 59/PMK.06/2005), and will use Government accounting software to record all transactions. Manual backups (general cashbook and its supporting books) will continue to be maintained in both finance bureau/sub unit and KPPN. Budget realization reports will be submitted to the Ministry of Finance on a quarterly basis.

12. *Reporting.* The DGH finance unit will work closely with the PMU, with support from CTC, in preparing un-audited Interim Financial Report (IFR) for the project. IFRs will be submitted to the Bank, through MOF, on a quarterly basis, within 45 days after the end of the reporting period.

13. *External Audit.* Annual special purpose project financial statements will be audited by independent auditors acceptable to the Bank. The annual audit reports shall be furnished to the Bank not later than six months after the end of the government fiscal year (June 30 of the following year). The audit will be conducted in accordance with the Term of Reference for audit acceptable to the Bank. DGH will make the annual audit report of the project available on the MPW website.

Disbursements

14. Advance, reimbursement, direct payment and special commitments method will be used for disbursement. The DA will be under the name of DG Treasury in the Ministry of Finance. The PCU will be responsible for reconciling the DA and preparing applications for the withdrawal of additional advances, duly approved by DG Treasury, before their submission to the Bank. Copies of the designated bank account statements will be provided to the PCU by the Directorate for Cash Management in DG Treasury, MOF.

15. The ceiling of the advance to DA will be variable, and advance(s) will be made on the basis of the six month projected expenditures. Reporting the use of the DA and for requests for reimbursement will be based on the quarterly IFR (Interim Financial Report). Applications for the advance to the DA shall be submitted together with reporting on use of DA funds which will consist of: (a) Interim Financial Reports (IFRs), and list payments for contracts under the Bank's prior-review; (b) projected expenditures for civil works, consultants and technical assistances for six months; and (c) the DA reconciliation statement. Applications for reimbursement will be supported by these same IFRs, and additional evidence that amounts to be reimbursed will have

actually been paid. Applications for direct payments will be supported by records evidencing eligible expenditures, such as copies of receipts and invoices. All documentation for expenditures submitted for disbursement will be retained by the Implementing Agency and be made available to the auditors for the annual audit, and to the Bank and its representatives, if requested.

Procurement

16. *Procurement Capacity Assessment*. An assessment of the procurement capacity of the Implementing Agency to procure this project identified the following key issues and risks: (a) procurement of groups of large packages with significant value will add complexity to the bidding process; (b) the central PMU will be newly established and the capacities of the procurement committees are unknown; (c) uneven understanding of the principles of the Bank's Procurement and Consulting Guidelines among procurement staff, in particular selection of Consultants and large ICB Procurement; (d) ex post review of EIRTP-2 revealed an inadequate filing system; and (e) the general procurement environment is weak and significant cases of fraud and collusive practices have been found in past projects. Project procurement risks are therefore rated "high".

17. The above risks will be mitigated by: (a) provision of support to the PMU and Procurement Committees through the CTC; (b) use of updated Project Management Manual from EIRTP-2 and SRIP; (c) procurement training during Project Launch and implementation; (d) the inclusion of clarifications on NCB procedures in the Legal documents and in the PMM; (e) assignment of experienced staff to procurement committees and the PMU; (f) strengthened filing system; and (g) establishment and implementation of the project's Anti-Corruption Action Plan.

18. Procurement for the proposed Project would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004, revised in October 2006 and May 2010; "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised in October 2006 and May 2010; and the provisions stipulated in the loan agreement. The prior-review and procurement method thresholds for the project are given below in Table A3.1.

Table A3.1: Procurement Thresholds

	Prior Review Thresholds (US$)	Procurement Method Thresholds (US$)							
		ICB	NCB	Shopping	QCBS	QBS	CQS	Least Cost	SSS
Goods	500,000	≥1,000,000	<1,000,000	<50,000					
Works	5,000,000	≥10 Million	<10 million	N/A					
Consulting	100,000 for firm SSS: All				default	TBD	<200,000	TBD	TBD

19. *Procurement Plan*. The Borrower, at pre-appraisal, developed a procurement plan for the project, which provides the basis for the procurement methods and review requirements by the Bank. This plan has been agreed between the Borrower and the Project Team on January 6, 2011 and is available at DGH. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Bank semi-annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Procurement packages are shown in Tables A3.2 and A3.3.

Table A3.2: Goods, Works, and Non Consulting Services

1	2	3	4	5	6	7	8
Ref No.	**Contract (Description)**	**Estimated Cost (U$ Million)**	**Procurement Method**	**Prequalification (yes/no)**	**Domestic Preference (yes/no)**	**Review by Bank (Prior / Post)**	**Expected Bid-Opening Date**
	A W P – 1						
1.	Krui – Biha	16.52	ICB	Yes	No	Prior	21 Sept 2011
2.	Padang Sawah - Sp.Empat (including Air Gadang Bridge)	23.04	ICB	Yes	No	Prior	21 Sept 2011
3.	Manggopoh – Padang Sawah	16.94	ICB	Yes	No	Prior	21 Sept 2011
4	Ipuh – Bantal	25.14	ICB	Yes	No	Prior	21 Sept 2011
	A W P – 2						
5.	Simpang Rampa – Poriaha	6.13	NCB	No	No	Prior	12 Feb 2012
6.	Ps. Pedati –Kerkap	8.00	NCB	No	No	Prior	12 Feb 2012
7.	Indrapura – Tapan	10.77	ICB	No	No	Prior	22 June 2012
8.	Bts.Kota Pariaman – Manggopoh	20.36	ICB	Yes	No	Prior	22 June 2012
9.	Rantau Tijang - Kota Agung	16.65	ICB	Yes	No	Prior	22 June 2012
10.	Simpang Empat - Sp.Air Balam	26.85	ICB	Yes	No	Prior	22 June 2012
11.	Bantal – Mukomuko	17.54	ICB	Yes	No	Prior	8 Sept 2012
12.	Kambang – Indrapura	19.11	ICB	Yes	No	Prior	8 Sept 2012
13.	Sp Rukis - Tj Kemuning	25.05	ICB	Yes	No	Prior	8 Sept 2012
	A W P – 3						
14.	Painan – Kambang	13.22	ICB	Yes	No	Prior	30 Nov 2012
15.	Sibolga - Batas Tapsel	14.36	ICB	Yes	No	Prior	30 Nov 2012
16.	Seblat – Ipuh Including Air Lalang Bridge & Air Guntung Bridge	12.25	ICB	Yes	No	Prior	30 Nov 2012

1	2	3	4	5	6	7	8
Ref No.	**Contract (Description)**	**Estimated Cost (U$ Million)**	**Procurement Method**	**Prequalification (yes/no)**	**Domestic Preference (yes/no)**	**Review by Bank (Prior / Post)**	**Expected Bid-Opening Date**
17.	Sp.Gng Kemala - Pugung Tampak (including Way Taau Bridge)	11.58	ICB	Yes	No	Prior	30 Nov 2012
18.	Mukomuko - Batas Sumbar	7.69	NCB	No	No	Prior	6 March 2013
19.	Lais – Bintunan	4.17	NCB	No	No	Prior	6 March 2013
20.	Lubuk Alung – Sicincin	6.06	NCB	No	No	Prior	6 March 2013
21.	Lubuk Alung – Kuraitaji	7.31	NCB	No	No	Prior	6 March 2013

Table A3.3: Consulting Services

1	2	3	4	5	6	7
Ref. No.	**Description of Assignment**	**Estimated Cost (US$)**	**Selection Method**	**Review by Bank (Prior / Post)**	**Expected Proposals Submission Date**	**Comments**
1.	Core Team Consultant (Project Management, Technical Assistant, Environmental &Social Aspect and Road Safety Audit)	5,000,000	QCBS	Prior	27 April 2011	
2.	Design and Supervision Consultant (Design WP 2 & 3 and Construction Supervision of Civil Works)	10,000,000	QCBS	Prior	27 April 2011	
3	Capacity Building for DGH Environmental/Risk Mitigation and Road Safety Unit (developing roadmap, norm, standard, procedures, criteria for disaster risk management in road sector, risk analysis and standard implementation)	1,000,000	QCBS/QBS/LCS/CQS/SSS/Individual	TBD	TBD	in a few contracts

20. *Procurement Supervision*. In addition to the prior review, procurement will be supervised by the Bank every six months during the first two years. The frequency of procurement supervision (including special procurement supervision for post-review/audits) after two years will be defined later.

Social

21. The social and land acquisition review of project components was carried out during project preparation to analyze direct and indirect social risks and impacts likely to be caused by the project activities. Selected national roads and bridges are to be implemented as 21 sub-projects in three consecutive work programs, WP-1, WP-2 and WP-3. The overall social impact of the Project is expected to be positive, as it will improve the travel conditions and times for a significant number of beneficiaries. Localized negative social impacts will be experienced during construction due to: (a) disruption to travel; (b) land acquisition and resettlement associated with capacity expansion and bridge replacement; and (c) possible exposure to HIV/AIDS due to the significant number of migrant workers on the sites. Mechanisms are put in place to manage these concerns. The project triggers Involuntary Resettlement (OP/BP 4.12). A Resettlement Policy Framework is included in the Environmental and Social Management Framework (ESMF).

23. *Land Acquisition and Resettlement Framework*. The betterment and capacity expansion sub-projects and some of the bridges to be replaced are likely to require some land acquisition and resettlement. To address these issues and to ensure compliance with Indonesian Regulations and the World Bank's Involuntary Resettlement policy OP 4.12, the project will use a Land Acquisition and Resettlement Policy Framework (LARPF). This Framework is the same as that in use for the on-going Bank supported EIRTP-2 and SRIP, with updates to reflect current Indonesian regulations. The Framework makes provision for compensation at market prices; and payments in full to Project Affected Persons (PAPs) before their land and other assets are taken into possession by the Project. The Framework also provides for public consultation with the PAPs, and includes a grievance mechanism, monitoring implementation of land acquisition, compensation and resettlement, as well as post-resettlement status of PAPs.

24. *Public consultations and compensation*. For consultation and socialization of LARAPs, the Directorate General of Highway has conducted several activities regarding consultation and socialization in the three Provinces where WP-1 subprojects will be implemented (West Sumatera, Lampung and Bengkulu). The process of consultation included meetings with different stakeholders such as Head of Sub-Districts from respective sub-districts in Regency administration area, Regional Development Planning Agency, Public Work Agency. Additionally, the District Government has also conducted socialization programs in the districts where the road segment is located which was attended by representatives of Sub-District Heads and Village Head. When preparing the LARAPs, the Local Government has undertaken the socialization of the project plan and consulted with the project-affected people on the desired type of compensation through direct interview, survey and focus group discussions. The Local Government will conduct further consultation on the land acquisition plan, affected assets, compensation principle, form and amount, schedule of land acquisition and compensation payment.

25. *Grievance procedures,* PAPs who are not satisfied with the implementation of land acquisition and resettlement can submit a complaint, objection or suggestion to the District Government in charge of the program. Based on the complaints submitted, the Local Government will conduct an investigation and documentation of the cases presented. The results of the investigations will be communicated to the PAPs within 12 days from the subsequent meeting and deliberation.

26. *Resettlement Monitoring.* LARAP implementation will be monitored by the local Monitoring Teams on a monthly basis. Project wide monitoring and reporting will be supervised by DOP. Monitoring information on each sub-project will be shared with the World Bank for review and comment. Project Reports submitted to the World Bank will include consolidated information on the status of LARAPs. The Terms of reference for monitoring consultants will be reviewed by the Bank. At the time of the Midterm Review and at Project closure, an independent consultant will review LARAP implementation based on terms of reference agreed with the Bank.

28. *Indigenous Peoples (OP 4.10*). A screening process for indigenous peoples in the Project area was conducted and the results show that OP 4.10 will not be triggered.

29. *HIV/AIDS.* The Project will involve a number of construction workers who will be living in base camps along the project corridors. To mitigate the risk of HIV/AIDS transmission, construction contracts include clauses requiring contractors to allow their workers to attend education sessions where materials such as awareness brochures and condoms will be distributed. This is a standard provision in the Standard Bidding Documents used for the works and agreed between Multilateral Development Banks and FIDIC. This is a small targeted activity, using existing materials, where the DGH will invite the relevant local health department and/or non-governmental organizations to provide services such as an initial information session, and one or two follow up meetings during contract execution. This activity will be financed through the contracts and will be targeted to an initial few contracts to see the results before expanding further. DGH will coordinate this work with the Ministry of Health.

30. *Project linkages.* The objective of the Project will be achieved without any additional interventions outside of the selected 21 road sections and 4 bridges. Road-related works outside of these road sections and bridges are not considered linked within the definition provided by OP4.12, and they are not relevant for the Project to achieve its objectives. Improvement of Way Magnia Bridge located within the Krui Biha road section sub-project included in WP-1,. is not included in WINRIP because DGH intends to finance this activity using its own budget. This bridge is considered a linked project under OP4.12, and the ESMF and the loan agreement contains the commitment of the government to apply the ESMF to this bridge. The final version of the land acquisition report for the Way Magnia bridge presented by the MPW is acceptable to the Bank and has been included as an addendum to the LARAP for Krui-Biha. Although such situations are not anticipated in WP-2 and WP-3, the ESMF and the loan agreement contain the commitment of the government to apply the ESMF if such cases are identified during detailed engineering design.

Environment

31. Detailed engineering designs and the environmental screening of the sub-projects in WP-1 based on environmental compliance requirements of both the GoI and the World Bank have been completed. Preliminary environmental screening of the sub-projects in WP-2 and WP-3 has also been undertaken but final detailed screening will be carried out when the detailed engineering designs for these sub-projects are prepared.

32. The selected sections pass through 12 districts with a total population of more than 4 million. The land use immediately adjacent to the selected road sections is mostly agricultural land (i.e., palm oil, tea, resin, rubber, coffee, coconut, and cinnamon). As the road has been in place for some time, the environmental impacts have already occurred. Therefore, the potential adverse environmental impacts associated with these works as described above are expected to be limited to construction related impacts; they are expected to be short lived, occurring mostly along the alignment of the selected road segments with some impacts potentially occurring at offsite locations such as quarry sites and spoil disposal sites.

33. The project is not expected to have longer term direct, induced or cumulative impacts on the environment including on natural habitats or critical natural habitats. For these reasons, as per the requirements of Environment Assessment OP4.01, the project has been assigned an EA Category of "B". The screening done indicated that physical cultural resources (in the form of graves and cemeteries) will be affected and therefore the project also triggers Physical Cultural Resources OP4.11.

34. The results of the screening in terms of the environmental documentation required for each sub-project to meet the requirements of both the Government of Indonesia and the World Bank are shown in Table A3.4.

Table 3.4: Screening Results[14]

No.	Sub-project	Km	Province	EA/Social Documents required under the GoI System		EA Documents Required under the WB OP4.01
	WP-1			ENV	SOCIAL	
1.	Krui - Biha	25.0	Lampung	N/A	LARAP	ECOPS
2.	Padang Sawah – Simpang Empat including the Air Gadang Bridge	40.9	West Sumatera	N/A	LARAP	ECOPS
3.	Manggopoh – Padang Sawah	32.0	West Sumatera	N/A	LARAP	ECOPS
4.	Ipuh - Bantal	42.4	Bengkulu	N/A	LARAP	ECOPS
WP-2						
5.	Sp Rampa - Poriaha	11.1	South Sumatera	UKL/UPL	SLARAP	ECOPS

[14] As stated in section 3.2, paragraph 3 above, all impacts are construction related and the only triggered environmental safeguards policies are Environmental Assessment OP4.01 and Physical Cultural Resources OP4.11

6.	Ps Pedati - Kerkap	25.0	Bengkulu	N/A	LARAP	ECOPS
7.	Indrapura - Tapan	19.5	West Sumatera	UKL/UPL	SLARAP	ECOPS
8.	Bts Kota Pariaman - Manggopoh	46.8	West Sumatera	AMDAL	SLARAP	ECOPS
9.	Rantau Tijang – Kota Agung	42.0	Lampung	AMDAL	LARAP	ECOPS
10.	Simpang Empat – Sp Air Balam	61.7	West Sumatera	AMDAL	SLARAP	ECOPS
11.	Bantal - Mukomuko	50.1	Bengkulu	AMDAL	SLARAP	ECOPS
12.	Kambang - Indrapura	55.2	West Sumatera	AMDAL	SLARAP	ECOPS
13.	Sp Rukis – Tj Kemuning	56.3	Bengkulu	N/A	N/A	ECOPS
WP-3						
14.	Painan - Kambang	31.5	West Sumatera	AMDAL	SLARAP	ECOPS
15.	Sibolga – Bts TapSel	36.0	South Sumatera	AMDAL	SLARAP	ECOPS
16.	Seblat – Ipuh including Air Lalang and Air Guntung bridges	34.5	Bengkulu	AMDAL	SLARAP	ECOPS
17.	Sp Gunung Kemala – Pugung Tampak	36.8	Lampung	AMDAL	LARAP	ECOPS
18.	Mukomuko – Batas Sumbar	25.8	Bengkulu	UKL/UPL	SLARAP	ECOPS
19.	Lais - Bintuan	11.6	Bengkulu	N/A	N/A	ECOPS
20.	Lubuk Alung - Sicincin	14.6	West Sumatera	UKL/UPL	SLARAP	ECOPS
21.	Lubuk Alung - Kurataji	16.8	West Sumatera	UKL/UPL	SLARAP	ECOPS

35. In compliance with Environment Assessment OP4.01, the DGH has prepared an Environmental and Social Management Framework (ESMF) for the project to ensure compliance management of WP2 and WP3. The ESMF contains the following measures:

(i) **Screening**: Sub-projects will be screened by the Design and Supervision Consultant as part of the detailed engineering design process to determine applicability of the GoI Amdal requirements as well as Bank requirements. The GoI requirements contain clear environmental impact screening requirements based on the type of works, length of the road segment, new alignment or existing alignment, land use and presence of and potential impacts on sensitive ecosystems.

(ii) **Mitigation and Monitoring Measures:** The ESMF provides clear guidance for mitigation and monitoring, which will be a part of the UKL/UPL or Amdal under the GoI system. For compliance with World Bank policy requirements, the preliminary screening of the WP-2 and WP-3 sub-projects show that impacts will most likely be limited to construction related impacts; the proposed mitigation measures are contained in the environmental codes of practice contained in the ESMF. Both the UKL/UPL and the environmental codes of practice are legally covenanted in, and attached to, the civil works contracts to ensure implementation.

(iii) **Institutional Arrangements, Capacity Building and Budget.** DGH will ultimately be responsible for implementing the ESMF and will be supported by its in-house environment and social unit, which is staffed with qualified and experienced national environmental and social specialists. DGH will review and approve the screening work done and the environment documents prepared by the Design and Supervision Consultants (DSC). DSC will be responsible for supervising implementation of the Amdal, UKL/UPL and the environment codes of practice. DSC will also provide periodic monitoring reports to DGH and the Bank. Civil works contractors will be responsible for implementing the mitigation measures attached to their contract.

(iv) The costs for implementing the mitigation measures will be included as pay items in the Bills of Quantities or Day Works, which will cumulatively be included in the sub- project contract sums. The costs of the DSC are included in the project, under Component 2, Implementation Support.

(v) **Consultations and Disclosure:** During project preparation, there were consultations on the ESMF with national and sub national institutions with key responsibility for implementing measures in the ESMF. During project implementation, as part of the preparation of the sub-project documents such as the UKL/UPL and Amdal, detailed and more focused consultations with the relevant sub-project affected people and other stakeholders will occur. Also, during these consultations, grievance redress mechanisms and the pedestrian safety measures in the environmental codes of practice will also be discussed with these groups. The ESMF has been reviewed and cleared by the Bank, and has been disclosed both in the Info shop and locally in Indonesia, prior to appraisal.

Project Monitoring and Evaluation

36. DOP will monitor the overall performance of the Project and its implementation, including: (a) the extent to which project objectives are being achieved; (b) the administrative, physical and financial progress of the project components; and (c) the extent to which required implementation procedures are being complied with. These monitoring and reporting arrangements will be enumerated in detail in the PMM. Baseline surveys will be carried out, starting in 2010. Monitoring will continue until 2017, three years after the completion of the construction program. Annual reports of the results of the survey program will be prepared. These reports should indicate progress made and measure performance against the results indicators established in the results framework (Annex I). On completion of the monitoring period in 2017, a Final Project Review will be undertaken to provide an overall evaluation of the project.

37. MPW is currently developing an IT based National Road Project Monitoring System (Integrated SiPP[15]). The IT system will monitor financial, technical and physical progress of

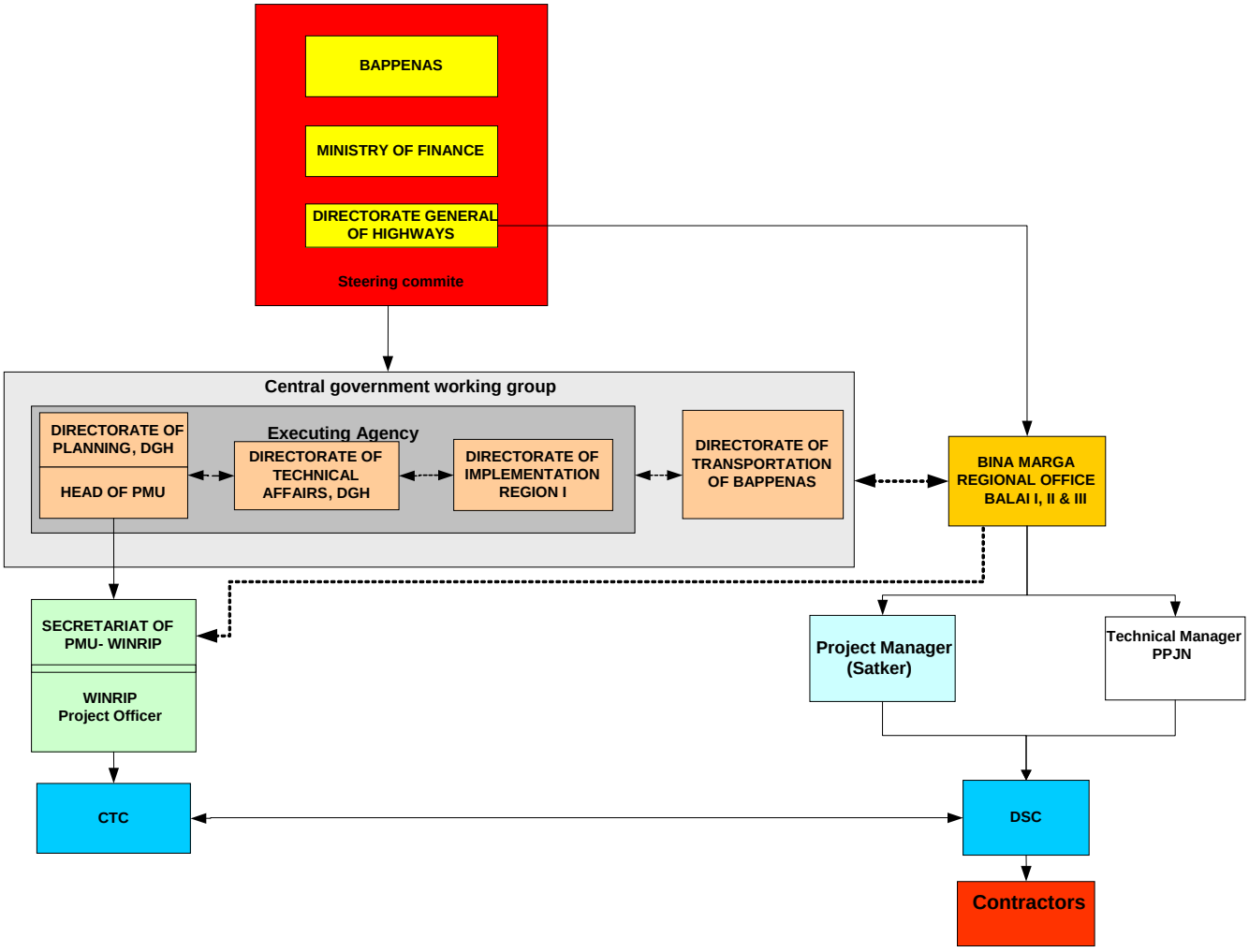
[15] SiPP or *Sistem Pemantauan Proyek* (Project Monitoring System) compiles and presents managerial reports such as contract scheduling, payment, and issues reported or complaints generated from projects. In the future the system will be integrated with *Simpajatan* or *Sistem Pengawasan Jalan dan Jembatan* (System for Roads and Bridges Monitoring), a system which monitors technical progress, to allow better integration of information for managers and policy makers.

national road projects through a website. Once in place (the IT integration is scheduled to be completed at the end of 2011), the system will enable MPW management to better access information on road projects in a timely manner, and information will be available to external stakeholders, which is expected to significantly improve project managerial performance. The IT based integrated monitoring system will be implemented in pilots, taking place in two national road projects from every province. SiPP will be piloted in WINRIP.

Partners

38. The most active development partners in the road sector at this time are the Bank and AusAID, with AusAID providing critical support both through the Bank and on its own through its IndII program. The AusAID-financed Eastern Indonesia National Roads Improvement Project (EINRIP) was approved in 2007 and is currently under implementation. The Bank team has been working closely with the AusAID-EINRIP team to harmonize design standards and implementation procedures in WINRIP. Support for preparation of WINRIP was provided in part by a PHRD grant and by a grant under the InDII program.

Figure A3.1: WESTERN INDONESIA ROAD IMPROVEMENT PROJECT (WINRIP)
PROJECT IMPLEMENTATION ORGANISATION



Annex 4: Full Operational Risk Assessment Framework (ORAF)

Project Development Objective(s)	
Description: The Project Development Objective (PDO) is to increase the effective use of national roads along the Western Sumatera Corridor by reducing road user costs.	
PDO Level Results Indicators.	1. Average passenger travel times reduced by at least 20% on project roads.
	2. Average vehicle operating cost for a typical car, bus and heavy truck reduced by at least 5%, 8%, and 10% respectively, on project roads.
	3. Increase of AADT on project road sections as per forecast

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
Project Stakeholder Risks	L	The Borrower, NGOs, residents in the project areas, or other donors may object to the project.	
Implementing Agency Risks	H	Under staffing in PMU and insufficient coordination within the IA. Lack of familiarity with Bank procurement and FM requirements on the part of staff assigned for such work, in particular members of the Procurement Committees.	DGH has recently established a Sub-Directorate dedicated to the preparation and implementation of projects financed by donors, which will be the PMU. Project preparation consultants (PPC), project management consultants (Core Team Consultants, CTC) and Design and Supervision Consultants, DSC will support the PMU and the PIUs. MPW is currently establishing Procurement Services Units, ULPs, at central and Balai levels and enhancing the use of the e-tendering system. An Anti-Corruption Action Plan (ACAP), building on lessons from past and ongoing Bank supported projects, will be adopted for the project.

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
Project Risks			
• Design	MI	Quality of design of the first year program.	Detailed designs for the first year program prepared by the PPC. Bank review of first year program designs. CTC support for the designs of the second and third year programs.
• Social & Environmental	ML	Land acquisition and resettlement process may prove to be difficult and could delay civil works.	Government has confirmed that it will allocate appropriate budget for land acquisition and resettlement. Environmental management and monitoring will be included in bid documents and contracts. Adequate safeguards staff will be included in the PMU/PIUs, and in the CTC and the DSC. Bank will supervise implementation of safeguards on a regular basis.
• Program & Donor	L	This is a stand-alone project and is not dependent on other donors' activities.	
• Delivery Quality	MI	Weak contract management and quality monitoring. Project area roads are exposed to earthquake related disasters, e.g., landslides, pavement damage, bridge collapse.	CTC will enhance project management processes, including construction management, monitoring and evaluation. Detailed designs will include mitigation of seismic risks. The Project includes a disaster risk response component.

Risk Rating at Preparation	Overall Risk Rating during Implementation	Comments
MI	MI	This project is similar to past and on-going projects with a reasonably well-performing IA. Project design has been enhanced, based on experience; in particular through the ACAP The Bank team will provide implementation support both through formal missions and on an on-going basis through country office based staff, especially on fiduciary and safeguards matters.

L - Low,
H - High
ML - High Livelihood – Low Impact
MI - Low Likelihood – High Impact

Annex 5: Implementation Strategy

1. The strategy for implementation support has been developed based on the nature of the project and its risk profile. It will aim at making implementation support to the client more flexible and efficient, and will focus on implementation of the risk mitigation measures defined in the ORAF for implementing agency risks (rated "high") and delivery quality risk (rated "medium-impact").

2. *Implementing Agency Risks.* Bank missions will confirm that the PMU and PIUs are fully staffed with qualified technical, procurement, FM and safeguard specialists and that appropriate training on their respective fields of expertise has been provided, including refresher training, where required. Missions will also review the staffing and the work of consultants supporting the PMU on project management (CTC), detailed engineering, design and construction supervision (DSC), and environmental and social aspects (CTC and DSC).

3. The Task Team Leader will maintain regular contact with key officials of DGH and PMU to exchange views on strategic issues of project implementation and address any critical issues, e.g., potential or actual non-compliance with important project covenants.

4. Bank FM and procurement specialists will provide necessary training to relevant PMU and PIU staff before commencement of the project implementation. They will review the efforts of DGH in implementing financial management and procurement in accordance with the PMM (Project Management Manual). In particular they, together with the Governance Specialist, will monitor disclosure of project information on the project and DGH website, the effectiveness of internal control arrangements to address possible fraud and corruption, and review the auditor's reports regarding weaknesses in controls and cases of fraud and corruption. The FM specialist and the procurement specialist will both be based in the country office to provide timely support. Supervision of financial management and procurement will be carried out semi-annually as part of the implementation support plan and additional support will be provided on an as needed basis in response to client needs.

5. The environment specialist and the social specialist will ensure that site specific EMP and LARAP are prepared consistent with the ESMF based on detailed designs, and confirm that they are acceptable to the Bank. They will confirm that the required safeguard staffing is in place at the PMU and PIUs, and have been provided the required training to carry out their responsibilities. They will make field visits on at least semi-annual basis to ensure that EMP and LARAP are being implemented in a satisfactory manner. The environmental and social specialists will both be based in the country office.

6. *Delivery Quality Risks.* The Bank technical specialists will confirm that the CTC and the DSC have adequate staff in place to review contract management, in particular construction quality. They will conduct site visits, jointly with the PMU, PIUs and the consultants on at least semi-annual basis throughout the project implementation period.

7. *Use of Country Office Based Staff.* In order to ensure that the mitigation measures to address the principal risks are being addressed in a satisfactory manner and to provide on-going implementation support to the implementing agency, key members of the Bank Task Team (technical, procurement, FM, environmental and social safeguards) will be country office based staff.

Implementation Support Plan

8. Table below indicates the focus areas and skill needs required to provide implementation support during the initial and subsequent periods of the project.

Time	Focus	Skills Needed	Resource Estimate
First 12 months	Review and facilitate implementation support consultants selection process	Procurement Specialist Transport Specialist	4 SWs 4 SWs
	Review and facilitate WP-1 bidding process	Procurement Specialist Highway Engineer	4 SWs 4 SWs
	Civil works implementation review	Highway Engineer	4 SWs
	Institutional arrangement and project supervision coordination	Transport Specialist	4 SWs
	Procurement capacity review and training	Procurement Specialist	3 SWs
	FM capacity review and supervision	FM Specialist	4 SWs
	Safeguard review and supervision	Environmental Specialist Social Specialist	6 SWs 6 SWs
	ACAP implementation review	Governance Specialist	3 SWs
	Task leadership	Task Team Leader	8 SWs
12-48 months	Review and facilitate TA consultants selection process	Procurement Specialist Transport Specialist	4 SWs 4 SWs
	Review and facilitate WP-2 and 3 bidding process	Procurement Specialist Highway Engineer	4 SWs 4 SWs
	Civil works implementation review	Highway Engineer	4 SWs
	Institutional arrangement and project supervision coordination	Transport Specialist	4 SWs
	Procurement training	Procurement Specialist	3 SWs
	FM review and supervision	FM Specialist	4 SWs
	Safeguard review and supervision	Environmental Specialist Social Specialist	6 SWs 6 SWs
	ACAP implementation review	Governance Specialist	3 SWs
	Institutional support	Disaster Risk Management Specialist	3 SWs
	Task leadership	Task Team Leader	8 SWs

9. Table below indicates the staffing needs for implementation support.

Skills Needed	Number of Staff Weeks	Number of International Trips	Comments
Task Team Leader	8 SWs annually	N/A	
Transport Specialist	4 SWs annually	N/A	
Highway Engineer	4 SWs annually	N/A	
Procurement Specialist	11 SWs annually	N/A	Country office based
FM Specialist	4 SWs annually	N/A	Country office based
Environmental Specialist	4 SWs annually	N/A	Country office based
Social Specialist	4 SWs annually	N/A	Country office based
Disaster Risk Management Specialist	3 SWs annually	N/A	Country office based
Governannce Specialist	3 SWs annually	N/A	Country office based

Annex 6: Team Composition

Bank staff and consultants who worked on the Project included:

Name	Title	Unit
Mustapha Benmaamar	TTL, Sr. Transport Specialist	EASIS
Imogene Jensen	Transport Sector Leader	EASIN
Mitsuyoshi Asada	Sr. Transport Specialist	EASIN
Dewi Wandansari	Project Officer	EASIS
Novira Asra	Sr. Financial Management Specialist	EAPCO
Iwan Gunawan	Sr. Disaster Management Specialist	EASIS
Amien Sunaryadi	Sr. Operations Specialist	EAPCO
Imad Saleh	Lead Procurement Specialist	EAPCO
Zhentu Liu	Sr. Procurement specialist	EAPCO
James Monday	Sr. Environmental Engineer	EASRE
Virza Sasmitawidjaja	Environmental Specialist/cons	EASIS
Juan Martinez	Sr. Social Scientist	EASIS
Francisca Melia	Social/Resettlement Specialist/cons	EASIS
Melinda Good	Sr. Counsel	LEGES
Yogana Prasta	Operations Adviser	EACIF
Sri Oktorini	Program Assistant	EACIF
Paul Lemaistre	Consultant	EASIS
Sally Burningham	Former TTL	LCSDE

Annex 7: Economic Analysis

1. The main objective of WINRIP is to identify road sections that are viable for betterment, and bring them up to the required standards for national roads. Such improvements include widening of the carriageway and provision of shoulders, improvements to drainage, minor improvements to alignment, and two-layer asphaltic concrete (AC) resurfacing. It is not a rehabilitation project designed to restore roads to their previous condition after they have deteriorated, or to determine priorities for improvements to the road surface.

2. A detailed process of identification, prioritization and selection of sub-projects for inclusion in the project was undertaken in formulating the project content for WINRIP. In summary, this involved a hierarchical search process, with a number of discrete steps (i) a network screening study of national road betterment needs for the whole of Western Indonesia region, which was conducted mainly using the Integrated Indonesian Road Management System (IRMS) database; (ii) review of DGH and regional priorities for road improvement; (iii) identification of major road corridors; and (iv) post-design review of economic viability. The selected roads were then ranked according to their level of readiness (land acquisition, environment and social) to form the Work Programs of the first, second and third year. Table 1 presents the economic appraisal results of the project roads selected under the Work Program 1 WP-1, WP-2 and WP-3.

3. *Traffic*: The derivation of base year traffic levels on the project road sections was made using the IRMS classified traffic count data from recent years and the results of moving observer traffic counts that were carried out on the total length of all road sections during the WINRIP Project. For the economic evaluation only normal traffic was included in the analysis. This is the traffic that would be expected to use the project roads if no improvement were made. Normal traffic flows are assumed to increase over time as a result of growth in population and economic activity, but not to increase as a result of the improvements resulting from the project. Generated traffic, which is additional traffic that occurs only as a result of the improvement to the road, was not included as the road user cost reductions are not considered large enough to generate traffic. Network effects were not considered and so diverted traffic, which changes from another route as a result of the improvement, was not taken into account. A standard set of traffic growth rates was used for all roads. The growth rates, as percent per year, were as follows:

	Years 1 - 5	**Years 6 - 25**
Motorcycle	12	8
Car / Jeep	8	6
Buses	3	3
Trucks	6	5

4. *General approach.* The general approach used for the evaluation of each road section followed conventional economic appraisal methodology for road projects. That is, it compared the situation predicted to occur with the project improvements to the roads, referred to as the "project case", and the situation expected to occur if the project is not implemented, referred to

as the "base case". Defining appropriate scenarios for the base case over the evaluation period is a key part of the analysis. An evaluation is based on the differences between the project case and the base case, not the differences between the situation before and after the project is implemented. It is possible for the base case to be defined as a "do nothing" or a "do minimum" alternative, in which no maintenance or only routine maintenance works are assumed to be carried out on the project roads during the evaluation period. However, this assumption is not appropriate for roads that are designated as national roads and are carrying significant volumes of traffic. These roads receive both routine and periodic maintenance. Without periodic maintenance they would progressively deteriorate, and surface roughness levels would become unacceptably high. If this were assumed to happen then the evaluation of almost any project works on the road would appear to be viable.

5. *Methodology.* The economic evaluation was carried out using the Highway Development and Management tool HDM-4; version 2.05 was used. The major benefits from road improvements are estimated as the differences between VOC and travel time costs for passengers in the base case and the project case using the HDM-4 model. The main benefit resulting from the improvements is in the form of travel time savings, which is a direct result of the higher speeds that are achieved on the improved roads. Thus, the economic returns from road investment are determined, taking into account the level of the improvement and road maintenance costs, and savings in road user costs (VOC and time savings) due to the provision of a better road facility. Where the bridges are on or adjacent to a WINRIP road sub-project section, they have been assessed as an integral component of the sub-project and the costs and benefits combined in the assessment. An economic appraisal methodology of the bridges was used in accordance to the circumstances at each bridge site. In most cases this is based on the benefit of removing delays that would occur at single-lane bridges. The evaluation period over which the sub-projects were assessed was 25 years, with 2010 as the base year because most of the road condition and traffic data relate to this year. The betterment works were assumed to be implemented during the period mid-2011 to mid-2014, giving a benefit period of 19 or 20 years depending on the implementation period.

6. *Results and Sensitivity Analysis.* The results of the economic analysis for road and bridge works are presented in Table A7.1. All subprojects are economically viable, most with an EIRR of over 30 percent. The overall NPV at 12% discount rate is over US$ 365 million, and the overall EIRR is 29.9%. A sensitivity analysis was carried out with three scenarios: (i) a 20% increase in capital costs; (ii) a 20% decrease in road user benefits; and (iii) the combined effect of both. Most subprojects remain viable in all cases; however, three sub-projects do fall just below 12% under scenario 3. The overall EIRR of WINRIP under scenario 3 is still over 21.7 percent.

Table A7.1: Evaluation Result Summary, 2010

No.	Sub-project Link No. and Name	Length (km)	Financial Cost (Rp mill)	Traffic (AADT)		NPV (Rp mill at 12%)	EIRR (%)
				Total	of which motorcycles		
	WP 1						
1	Lampung : Link No. 053.0, Krui – Biha and Way Magnai Bridge	25.0	158,268.0	6,800	5,000	66,401.8	19.1
2	West Sumatera : Link No. 047.2, Padang Sawah - Simpang Empat and Air Gadang Bridge	40.9	207,390.3	10,550	7,350	466,380.6	38.2
3	West Sumatera : Link No. 047.1, Manggopoh - Padang Sawah	32.0	152,434.9	5,890	3,270	167,102.8	27.9
4	Bengkulu : Link No. 015.1, Ipuh – Bantal	42.4	226,275.1	3,000	1,500	19,406.6	13.7
	WP 2						
5	Sumbar : Link No. 024.0, Bts. Pariaman – Manggopoh	46.8	183,268	8,900	4,650	655,780.7	55.8
6	Lampung : Link No. 026.1, Rantau Tijing - Kota Agung	42.0	149,831	18,350	10,500	149,810.7	31.1
7	Sumbar : Link No. 034.1, Sp. Empat - Sp. Air Balam	61.7	241,617	7,150	5,000	355,518.6	37.2
8	Bengkulu : Link No. 006.1, Simpang Rukis - Tanjung Kemuning	56.3	225,481	5,600	3,000	308,280.2	30.7
9	Bengkulu : Link No. 015.2, Bantal – Mukomuko	50.1	157,820	3,800	2,500	81,997.0	21.1
10	Sumbar : Link No. 017.2, Kambang – Indrapura	55.2	171,948	2,800	800	84,757.3	20.9
11	Sumbar : Link No. 019.0, Indrapura – Tapan	19.5	96,921	4,700	3,300	25,906.8	16.6
12	Sumut : Link No. 015, Sp. Rampa – Poriaha	11.1	55,126	1,400	500	16,078.9	18.0
	WP 3						
13	Sumbar : Link No. 017.1, Painan – Kambang	31.5	118,993	8,600	6,250	229,912.3	39.0
14	Sumbar : Link No. 027.0, Lubuk Alung – Kurataji	16.8	65,788	17,400	11,000	196,960.0	58.8
15	Bengkulu : Link No. 009.1, Lais – Bintuan	11.6	37,558	12,000	4,000	48,644.7	42.6
16	Bengkulu : Link No. 010.0, Ps. Pedati – Kerkap	25.0	72,018	16,000	12,000	64,495.8	33.3
17	Bengkulu : Link No. 015.3, Mukomuko - Bts. Sumbar	25.8	69,233	3,980	2,500	45,944.1	26.8
18	Bengkulu : Link No. 009.4, Seblat – Ipuh and Air Gunung and Air Lalang Bridges	34.5	110,237	4,200	2,500	82,883.6	24.6
19	Sumbar : Link No. 002.0, Lubuk Alung – Sicincin	14.6	54,557	16,150	8,000	63,113.5	37.7
20	Sumut : Link No. 016.0, Sibolga - Bts. TapSel	36.0	129,228	4,780	2,000	132,286.1	29.3
21	Lampung : Link No. 061.1, Sp. Gunung Kemala - Pugung Tampak and Way Taau Bridge	36.8	104,238	2,520	1,000	23,498.0	16.9
	Total Project	**715.6**	**2,788,230**			**3,285,160.1**	**29.9**

Annex 8: Anti- Corruption Action Plan

1. The objective of this WINRIP Anti-Corruption Action Plan (ACAP) is to identify governance risks and mitigation measures beyond the standard control systems employed in the past projects. This Action Plan: (i) maps potential governance risks; and (ii) presents program activities to address these risks in the form of an Action Plan led by the implementing agency (DGH) and supported by the government systems. It also complies with the World Bank Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grant, October 2006.

2. ***Lessons Learned.*** The Plan draws lessons from previous road sector projects, namely SRIP and EIRTP 1 and 2, to strengthen and improve the effectiveness of the measures employed to mitigate project related governance risks.

i. The ACAPs in the past projects focused on mitigating collusion risks by directly imposing conditions in the procurement process, such as hiring of a procurement agent (for consultancy services) and procurement advisors (for civil works), and prohibition of pre-qualification to reduce opportunities for bidders to know who will be bidding. In practice, however, many of these conditions impeded the progress of project implementation, while their intended effect was limited. For example, in most of the large bidding cases in Indonesia the bidders know other participants anyway. Thus, prohibition of pre-qualification did not serve its original purpose, while post qualification for large contracts caused serious delays in the evaluation process, along with speculations of biased interpretation of qualifications. In contrast, a well established complaints handling mechanism should be effective against collusion risks since most past collusion cases were whistle-blown by competitors who were not involved in the collusion. Monitoring of this process could in turn be strengthened by more closely tracking signs of manipulation in the submitted bids, e.g., through unit price analysis and review of bid securities by the Core Team Consultant (CTC).

ii. Past experience also indicates that enhanced transparency and oversight can effectively contribute to governance improvements. Greater inclusion of civil society likely enhances project management, and reduces the risk of civil society misunderstanding of the scope and objectives of the project. The project management can also benefit from the civil society as an informed but objective source of information. In recent projects, this has been accomplished by a combination of: (i) sound disclosure policy; (ii) independent oversight, (iii) improved monitoring through an Information Management System; (iv) stringent auditing; and (v) a well established complaints handling mechanism. These measures have improved the transparency of the project implementation and management. It has enhanced civil society interest in these public works, and it has led to a more attentive project management approach by the implementing agency. Good practices and additional oversight, such as the use of Community Representative Observers (CROs) in the bid opening processes and Third Party Monitoring (TPM) during construction, will thus be sustained and used to complement technical and financial audits of the project. Additional efforts, however, need to be made to energize and expand civil society oversight, especially in remote areas, by advertisement and follow-up training. In so doing TPM interests will be enhanced by properly bearing necessary costs and expenses, such as their report

production, which was not covered by the project budget before. With these improvements, it is expected that civil society oversight can be made more effective.

3. ***Action Plan Principles.*** The following provides principles of the Action Plan:

i. ***Improved Effectiveness of Procurement Procedures within Ministry of Public Works.*** Procurement process remains one of the highest governance concerns. Procurement of the expected 21 contracts will be undertaken by the Ministry of Public Works, either in Jakarta or in the relevant provinces. The plan is thus formulated based on the centralized model allowing better monitoring and quality. The following procurement packages are expected:

- 15 ICB and 6 NCB works contracts;
- Three consultancy services contracts, including for Core Team Consultant and Design and Supervision Consultants.
- One goods contract.

The Ministry of Public Works will enhance the procurement implementation and monitoring with the following schemes:

- Semi E-tendering on the MPW official public website for both works and consultant services contracts. The official website, www.pu.go.id will publish key information related to WINRIP, including invitation for bids, download of bidding documents, bid clarifications, minutes of bid opening, and information of bid award. The full e-procurement could be used following World Bank's assessment and no objection. (Notes: Other requirements can be added after no objection from the Bank.)
- Establish criteria for nominating procurement committees.
- No rebids: no sub- project is eligible for financing, should there be a need for a rebid due to corruption and/or collusion.

ii. ***Enhancement of the MPW IT based National Road Project Monitoring System.*** Following recommendations of a study on the National Road Monitoring System conducted by the KPK in 2009, DGH agreed to implement a set of DG-wide corruption prevention action plans. The agreement took the form of a formal letter signed by the DG to the KPK, numbered UM.01.11-Db/893 dated November 26, 2009. The action plan comprises 17 areas, grouped into institutional, human resources and processes. The plan was publicly communicated at the end of April 2010, through a seminar supported by the Bank, whereby the DG presented the plan, followed by KPK's views, and commitment declared by the Vice Minister of Public Works to implement the plan. One of the actions relevant to this ACAP is to enhance the usage of the Ministry's IT system (Integrated SiPP[16]) to monitor financial, technical and physical progresses of national road projects through the website. This action is aimed at developing a system to enable project supervision and monitoring which is publicly accessible. Once in place (the IT

[16] SiPP or *Sistem Pemantauan Proyek* (Project Monitoring System) compiles and presents managerial reports such as contract scheduling, payment, and issues reported or complaints generated from projects. In the future the system will be integrated with *Simpajatan* or *Sistem Pengawasan Jalan dan Jembatan* (System for Roads and Bridges Monitoring), a system which monitors technical progress, to allow better integration of information for managers and policy makers.

integration is scheduled to be completed at the end of 2011)[17], the system will enable the MPW management to better access information on road projects in a timely manner, and information will be available to external stakeholders. This is expected to significantly improve project managerial performance. This system will also allow civil society organizations (such as academia, media, professional associations) to participate in the monitoring of national road projects.

The IT based integrated monitoring system will be implemented on a pilot basis by selecting two national road projects from every province. MPW has agreed with the Bank to include WINRIP as part of the pilot program. The implementation of aforementioned action plan will be monitored by KPK, following a formal request from DGH seeking KPK's support in supervising national projects, particularly WINRIP, to identify governance risks, fraud, collusion, coercion or obstruction.

iii. ***Enhanced Disclosure Provisions and Transparency.*** MPW will provide necessary information in the PIP, PMM on its website, and in the bidding documents, such as contact point for complaint (mail and email address, phone, fax, text message). The contact will also include the Bank's Fraud and Corruption Hotline. MPW will hold Annual Accountability Meetings to enhance accountability and project information sharing with civil society. The PMM will provide guidelines on disclosure of information related to the project. MPW official website will display critical information on WINRIP to enhance both internal and external monitoring of the project:

- Work Plan and Procurement Plan.
- Quarterly newsletter containing information on the list of contracts, implementation progress, project related activities, number, types and status of complaints in each location. The newsletter will also be made available to civil society in hard copy and through electronic mailing system.
- Mid-Term Review Report, promptly after completion of the mid-term review implementation support is carried out in accordance with the loan agreement;
- All final audit reports (financial or otherwise, including qualified audit reports) prepared in accordance with the loan agreement and all formal responses of the government in relation to such reports. The publication should be done within one month after the report is accepted as final.
- Contracts awarded with information on general scope of work (with location), value, and summary information of the awarded firms/contractors. The practice in other projects demonstrates that disclosure of contracts awarded will help in reducing fraudulent practices.

iv. ***Civil Society Participation in Oversight.*** MPW will actively encourage representatives of civil society groups to attend public bid openings (and sign attendance list at the opening), and other key procurement steps. A contact database will be maintained if interviews are required to acquire better information of some observations. The selection of CRO and TPM in the past projects was based on local interests. The CROs were mostly local university staff, and the TPMs were knowledgeable persons

[17] The deadline for the submission of proposals was February 24th, 2011 and DGH has received 35 bids and is currently proceeding with the bid evaluation. The Consultant work will be completed by the last quarter of 2011.

hired by the selected NGO. The CROs are required to submit a report on their bid process observations, and the TPMs are required to independently monitor the progress of the implementation of each package. The Guidelines on the selection and role of observers will be provided in the PMM, including the past best practice. For example, the past exemplary CRO reports will be referred to for the new CROs. The MPW website will display, for each package, the value of contract awarded, name of contractor, location, scope of contract, and will have regularly updated pictures of works being performed. The web-based reporting system will also generate public voluntary oversight of the project. MPW will arrange meetings with universities, particularly civil engineering faculties, to encourage them to participate in overseeing the national road projects at least through website.

v. ***Complaints Handling Mechanism.*** A complaints handling mechanism will be enhanced by the MPW. The mechanism will include provision for recording, referral, and follow up investigations of substantial complaints by the Inspectorate General, or third party audit to ensure independency and reliability. All complaints received will be acknowledged to the complainant within 7 days of receipt, with a copy to the Bank. Bid-related complaints received during bid evaluation period will be responded after the contract award. Strict procedures to ensure anonymity of informants will be enforced. Tracking of the status of investigations and measures taken will be reported on quarterly basis. Complaints deemed possible serious infringements may be further investigated by the Bank. Through its anti-corruption hotline and complaints which can directly be made online to the Integrity Vice-Presidency (INT).

vi. ***Sanctions & Remedies.*** Clear sanctions and remedies are an important final step in the effort to fight against corruption. This Project has zero tolerance for corruption. Any person (government, non-government, consultant, facilitator, contractor etc.) can be sanctioned if sufficient evidence is available. In all procurement and consultant contracts, evidence of corruption, fraud, collusion, coercion and obstruction will result in termination of the relevant contract, possibly with additional penalties imposed (such as fines, blacklisting, etc.) in accordance with the Bank and Government regulations. The Government will exercise its contractual remedies, and the Bank's disbursement to any given contract can be suspended or stopped completely if cases of fraud and corruption are not dealt with effectively.

4. ***Corruption Risk Mapping Matrix and Actions.*** Limiting the governance risks in this project starts with identifying potential risk areas called a corruption risk mapping. The exercise maps the potential governance risks and assesses the corresponding level of risk. Based on the identified risk levels, a set of mitigation actions is formulated. The Corruption Risk Mapping Matrix is presented at the end of this Annex in Table A8.1. The WINRIP ACAP presented in the Corruption Risk Mapping Matrix is based on the above principles and experience in the sector in recent years. The main areas of actions are stated below.

A. Enhanced Disclosure and Transparency
B. Enhanced Civil Society Oversight
C. Enhanced Complaints Handling Mechanism
D. Mitigation of Collusion, Forgery and Fraud Risks
E. Sanctions and Remedies

Table A8.1: Corruption Mapping Matrix

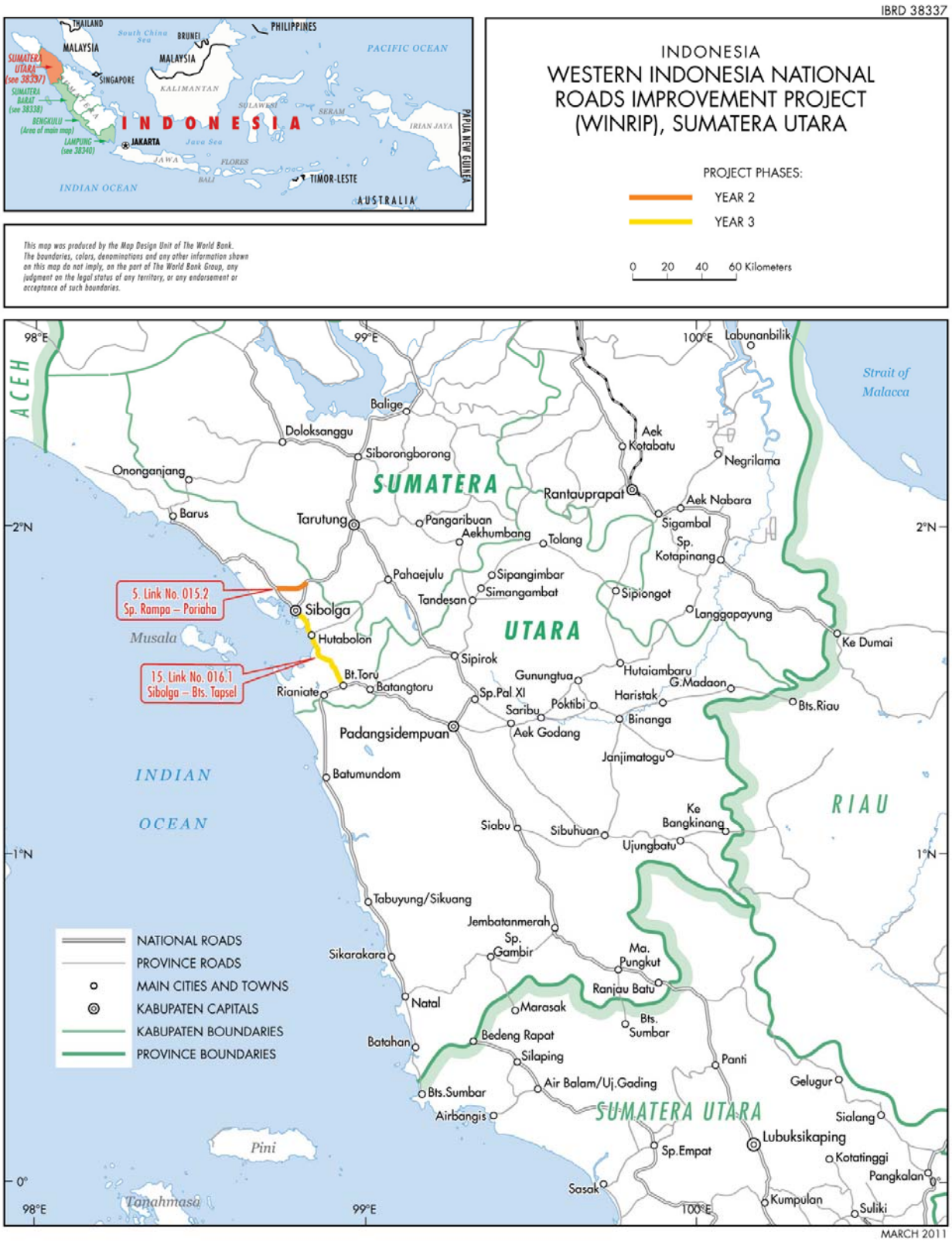
Risk Area	Level of Risk	Opportunity for weak Governance	Mitigation Actions
Enhanced Disclosure and Transparency	Medium	Salient information is not available for both internal and external stakeholders, which hinders effective project monitoring.	1. MPW will provide the contact information for complaints related to WINRIP in the PIP, PMM, MPW website and in the bidding documents.
			2. Each work program (WP-1, 2 and 3) and the Procurement Plan will be published on the official website of MPW and made available to the public as a part of the public disclosure policy of the project. The Procurement Plan will be updated annually.
			3. MPW will publish a quarterly newsletter on the official website of MPW, including information concerning the list of contracts, implementation progress, project-related workshops and the number, typology and status of complaints. MPW will send the quarterly newsletter to the civil society forum in each project province in hard copy or through an electric mailing system.
			4. MPW will make all bidding documents, short-list of consultants and requests for proposals (this provision does not include actual bids and proposals) issued in accordance with the procurement provisions of the loan agreement to any member of public promptly upon request, subject to payment of a reasonable fee for producing bidding documents and request for proposals. Such documents will continue to be made available until a year after completion of the contract entered into for the goods, works or services in question.
			5. In line with the World Bank Procurement Guidelines, MPW will publish in UNDB on-line, dgMarket, and on MPW website within two weeks of contract award (after Bank's no objection) the following information; (a) name of each bidder who submitted a bid; (b) bid prices as read out at the bid opening; (c) name and evaluated prices of each bid; (d) name of bidders whose bids were rejected and the reasons for rejection; and (e) name of the winning bidders and the prices, as well as the duration and summary scope of the contract awarded. MPW will also make available, promptly upon request by any person or company, a list of all contracts awarded in the three months preceding the date of such request, including the name of the contractor/ supplier/ consultant, the contract amount, the number of bidders/proposals, the procurement method and the purpose of the contract.
			6. MPW will make publicly available promptly after receipt of all final audit reports (financial or otherwise, including qualified audit reports) prepared in accordance with the loan agreement and all formal responses of the government in relation to such reports. MPW will also post this on the MPW official website within one month after the report is accepted as final.
			7. MPW will monitor financial, technical and physical progress of the project by an IT system (integrated SiPP) as publicly accessible project monitoring system.
Enhanced Civil Society Oversight	Medium	Lack of external oversight leads to less demand for project accountability.	8. MPW will actively encourage representatives of civil society groups to attend the public bid openings and other key procurement steps. Community Representative Observers (CROs) will be invited from local universities or other selected independent institutions, and will sign the

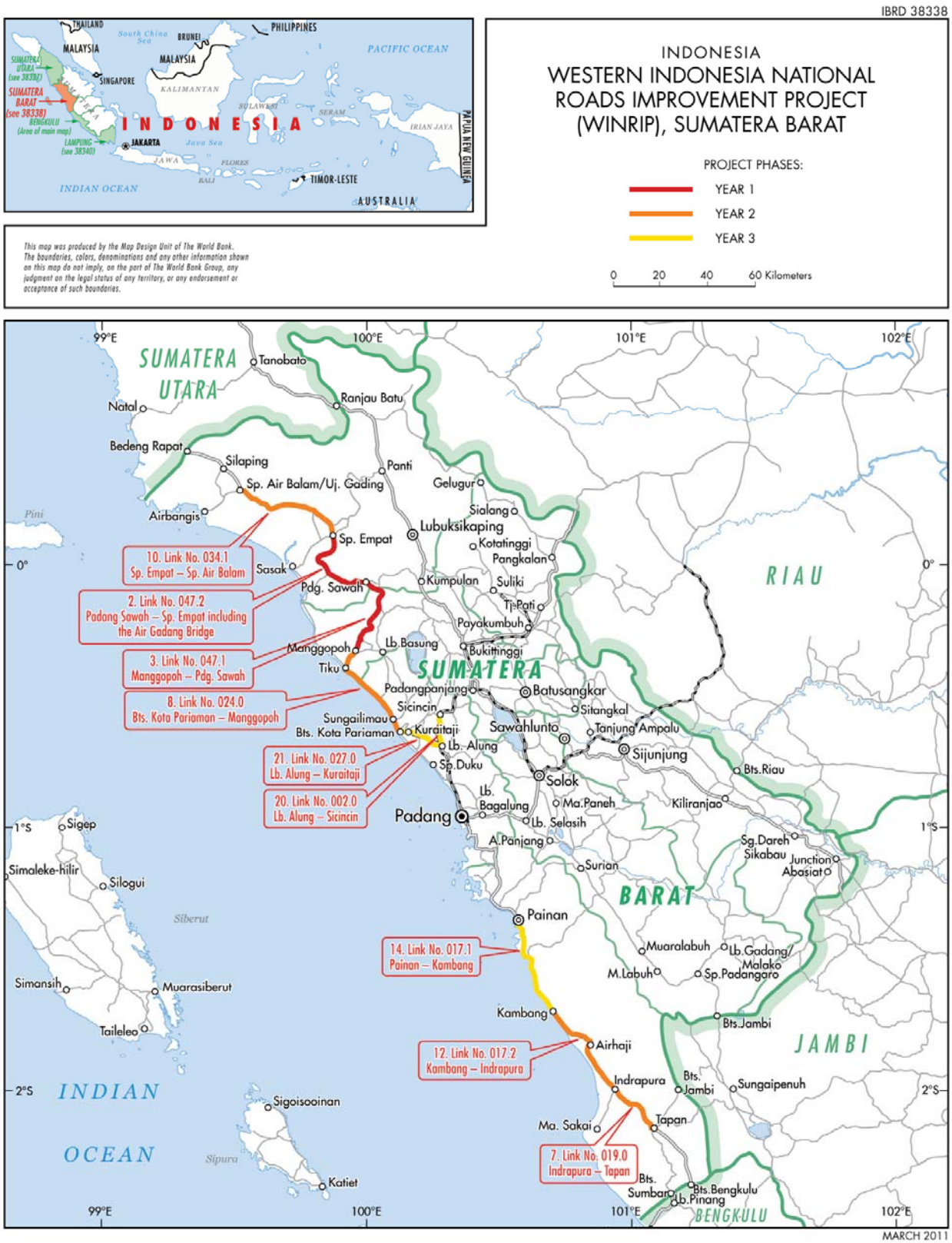
Table A8.1: Corruption Mapping Matrix

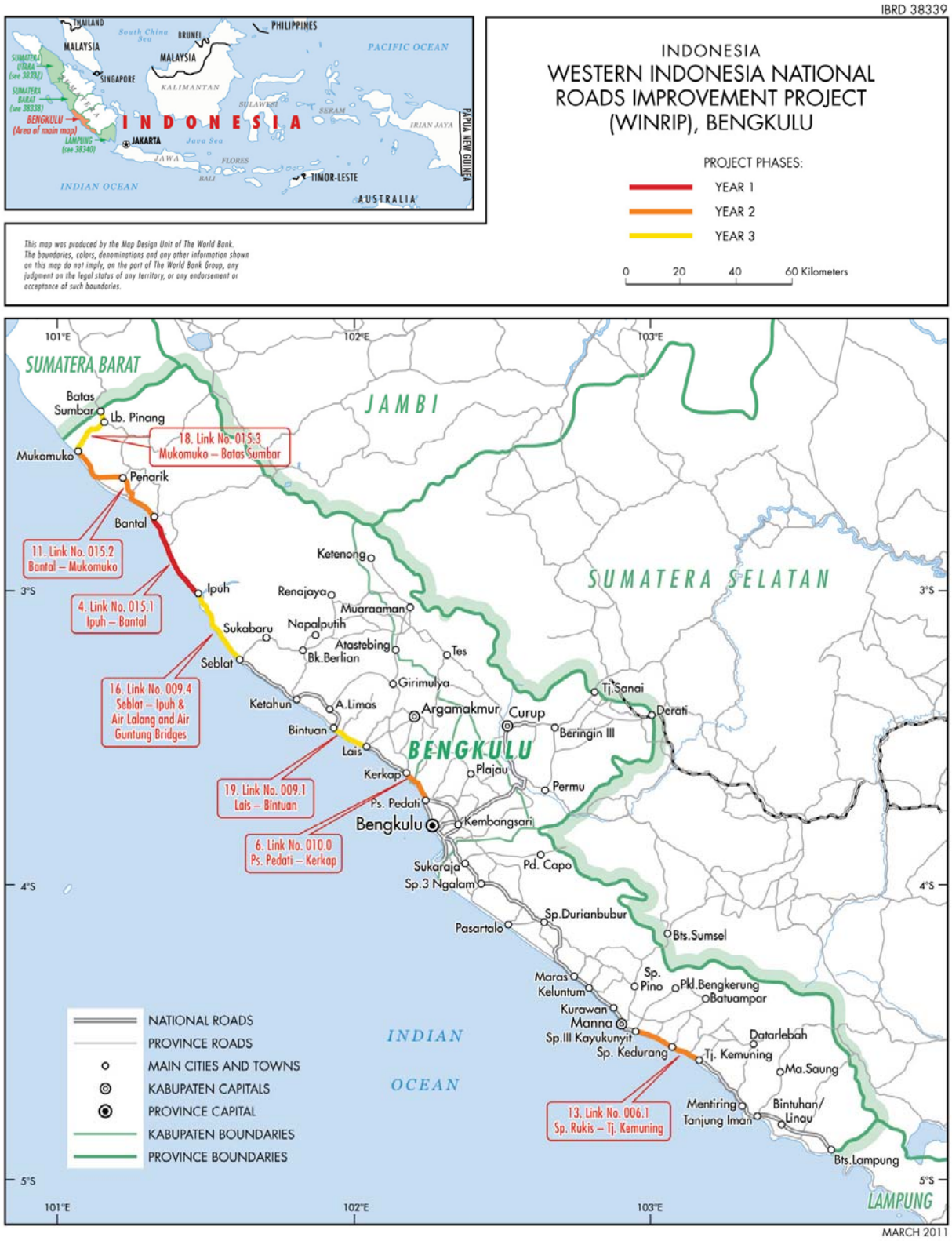
Risk Area	Level of Risk	Opportunity for weak Governance	Mitigation Actions
			attendance list for the procurement/selection process. Guidelines on appropriate procedures will be provided in the PMM.
			9. MPW will establish a Third Party Monitoring (TPM) mechanism whereby the media and civil society groups can become involved in monitoring the progress of the project. This mechanism will include regular sharing of information with the media.
			10. MPW will hold Annual Accountability Meetings to enhance accountability and sharing of project information. The first of these meetings will be held at the province level before procurement of contractors or service providers, so that any civil society and community representatives can be selected in a transparent manner. The agenda of each meeting will be widely distributed among interest parties.
Enhanced Complaints Handling Mechanism	Medium	Issues are not reported, complaints are not addressed, and fears of recriminations for reporting corrupt or fraudulent conduct leads to discourage complaint.	11. An enhanced complaints handling mechanism, which includes maintaining project complaint log and filing to monitor status of follow-up of each complaint, will be established by the MPW. This mechanism will include provision for follow up investigations of substantial complaints by the Inspectorate General or third party audit to ensure independence and reliability of the system. a. All complaints received will be acknowledged to the complainant by the Project Implementation Unit (PIU) within seven (7) days of receipt with a copy to PMU, DGRI and the World Bank. Bid-related complaints received during bid evaluation period will be responded after the contract award. b. All complaints handling component will be included in the MPW website, and will be updated on a monthly basis. c. The information concerning the alternative conduits for complaints (telephone hotline, dedicated email address and PO Box) will be widely disseminated. d. Strict procedures to ensure anonymity of informants will be enforced whenever necessary. e. Recording and appropriate referral of all incoming complaints will be undertaken by MPW with each case generating an automatic, standard format report to the Bank. Complaints which are deemed possible serious infringements may be subject to further investigation by the Bank.
Mitigating Collusion, Forgery and Fraud Risks	High	Based on past experience, there are high risks of collusion, kickbacks and bribes, overpayment and poor delivery of contracts.	12. MPW will use the "Semi E-Tendering" on the MPW official public website for both works and consultant services. The official website (www.pu.go.id) will publish key information related to WINRIP which includes; (a) invitation for bids; (b) download of bidding documents; (c) bid clarifications; (d) minutes of bid opening; (e) information of contract award. Other requirements can be added after no objection from the Bank.
			13. All specifications will be defined in the bidding documents, and all clarifications will be sought

Table A8.1: Corruption Mapping Matrix

Risk Area	Level of Risk	Opportunity for weak Governance	Mitigation Actions
			through written correspondence and replies will be sent to all bidders.
			14. MPW, through CTC, will analyze key indicators of submitted bids to track unreasonable unit pricing and indication of collusion, and prepare a short technical report for each group of bidding (the bidding packages simultaneously invited) and share it with the Bank.
			15. Contracts will be awarded within original bid validity period. Any extension of bid validity period from the second extension or cumulatively greater than four (4) weeks will require Bank's no objection. The Bank will not provide no objection to any extension beyond eight weeks.
			16. Guidelines for preparation of specifications/selection criteria in the bidding documents and request for proposals will be prepared to ensure compliance with the Bank Guidelines.
			17. MPW will use FIDIC arrangements with the independent supervision consultant having responsibility as the "Engineer" in the works contracts.
			18. MPW will establish criteria for nominating procurement committees. Each Project Implementation Unit will include a specified procurement officer and financial management officer.
			19. MPW will establish procedures to maintain proper project and procurement filing, including filing of advertisements, bidding documents/request for proposals, clarifications/addenda to bidding document/request for proposals, minutes of bid opening, evaluation reports, contract award and final contract documents, and also for regular review of accounting reports, including all supporting documents (i.e. travel report, receipts, etc.).
			20. MPW will conduct regular interim audits by third parties, which will include review of procurement process and results.
Sanctions and Remedies	Medium	Weak Sanctions and Remedies does not prevent future corruption	21. MPW will establish the remedial actions and sanctions for cases of fraud and corruption that are reported and for which evidence is found. This will include sanctions to staff proven to be involved in such cases.
			22. In all project contracts, evidence of fraud, corruption, collusion and coercive practices will result in termination of the relevant contract, possibly with additional penalties imposed, such as fines, blacklisting, etc. in accordance with Bank and/or Government regulations, and may result in suspension of disbursement of funds with respect to such contract. Any entity which is found to have misused funds may be excluded from subsequent funding. Information regarding such cases, where lessons are learned and funds are retrieved, will be widely disseminated.
			23. Disbursement to any given contract/location can be suspended or stopped completely if cases of corruption are not dealt with effectively.


IBRD 38337
INDONESIA
WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT (WINRIP), SUMATERA UTARA
PROJECT PHASES:
YEAR 2
YEAR 3
0 20 40 60 Kilometers
This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.
THAILAND
MALAYSIA
SINGAPORE
BRUNEI
PHILIPPINES
PACIFIC OCEAN
KALIMANTAN
SULAWESI
SERAM
IRIAN JAYA
PAPUA NEW GUINEA
INDONESIA
JAKARTA
JAWA
FLORES
BALI
TIMOR-LESTE
AUSTRALIA
INDIAN OCEAN
Java Sea
South China Sea
SUMATERA UTARA (see 38397)
SUMATERA BARAT (see 38338)
BENGKULU (Area of main map)
LAMPUNG (see 38340)
ACEH
SUMATERA
UTARA
RIAU
SUMATERA UTARA
Strait of Malacca
INDIAN OCEAN
Musala
Pini
Tanahmasa
5. Link No. 015.2 Sp. Rampa – Pariaha
15. Link No. 016.1 Sibolga – Bts. Tapsel
Labunanbilik
Balige
Doloksanggu
Siborongborong
Aek Kotabatu
Negrilama
Onongonjang
Rantauprapat
Aek Nabara
Barus
Tarutung
Pangaribuan
Aekhumbang
Tolang
Sigambal
Sp. Kotapinang
Pahaejulu
Sipangimbar
Simangambat
Tandesan
Sipiongot
Langgapayung
Sibolga
Hutabolon
Sipirok
Ke Dumai
Hutaimbaru
G.Madaon
Gunungtua
Bt.Toru
Batangtoru
Rianiate
Sp.Pal XI
Haristak
Bts.Riau
Saribu
Poktibi
Binanga
Padangsidempuan
Aek Godang
Janjimatogu
Batumundom
Ke Bangkinang
Siabu
Sibuhuan
Ujungbatu
Tabuyung/Sikuang
Jembatanmerah
Sp. Gambir
Ma. Pungkut
Sikarakara
Ranjau Batu
Natal
Marasak
Bts. Sumbar
Batahan
Bedeng Rapat
Silaping
Panti
Air Balam/Uj.Gading
Gelugur
Bts.Sumbar
Airbangis
Sialang
Lubuksikaping
Sp.Empat
Kotatinggi
Pangkalan
Sasak
Kumpulan
Suliki
98°E
99°E
100°E
2°N
1°N
0°
NATIONAL ROADS
PROVINCE ROADS
MAIN CITIES AND TOWNS
KABUPATEN CAPITALS
KABUPATEN BOUNDARIES
PROVINCE BOUNDARIES
MARCH 2011


IBRD 38338
INDONESIA
WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT (WINRIP), SUMATERA BARAT
PROJECT PHASES:
YEAR 1
YEAR 2
YEAR 3
0 20 40 60 Kilometers
This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.
THAILAND
MALAYSIA
SINGAPORE
BRUNEI
PHILIPPINES
PACIFIC OCEAN
KALIMANTAN
SULAWESI
SERAM
IRIAN JAYA
PAPUA NEW GUINEA
I N D O N E S I A
JAKARTA
Java Sea
JAWA
FLORES
BALI
TIMOR-LESTE
INDIAN OCEAN
AUSTRALIA
SUMATERA UTARA
SUMATERA BARAT
BENGKULU
LAMPUNG
SUMATERA UTARA
Tanobato
Natal
Ranjau Batu
Bedeng Rapat
Silaping
Panti
Sp. Air Balam/Uj. Gading
Gelugur
Airbangis
Sialang
Lubuksikaping
Sp. Empat
Kotatinggi
Pangkalan
Pini
Sasak
Pdg. Sawah
Kumpulan
Suliki
Tj.Pati
Payakumbuh
Manggopoh
Lb.Basung
Bukittinggi
Tiku
SUMATERA
Padangpanjang
Batusangkar
Sicincin
Sitangkal
Sungailimau
Bts. Kota Pariaman
Kuraitaji
Sawahlunto
Tanjung Ampalu
Lb. Alung
Sijunjung
Sp.Duku
Bts.Riau
Solok
Lb. Bagalung
Ma.Paneh
Kiliranjao
Padang
Lb. Selasih
A.Panjang
Sigep
Sg.Dareh
Sikabau Junction
Abasiat
Simaleke-hilir
Silogui
Surian
BARAT
Siberut
Painan
Muaralabuh
Lb.Gadang/ Malako
M.Labuh
Sp.Padangaro
Simansih
Muarasiberut
Kambang
Bts.Jambi
Taileleo
Airhaji
JAMBI
Indrapura
Bts. Jambi
Sungaipenuh
INDIAN
Sigoisooinan
Tapan
Ma. Sakai
OCEAN
Sipura
Bts. Sumbar
Bts.Bengkulu
Lb.Pinang
Katiet
BENGKULU
RIAU
99°E
100°E
101°E
102°E
0°
1°S
2°S
10. Link No. 034.1 Sp. Empat – Sp. Air Balam
2. Link No. 047.2 Padang Sawah – Sp. Empat including the Air Gadang Bridge
3. Link No. 047.1 Manggopoh – Pdg. Sawah
8. Link No. 024.0 Bts. Kota Pariaman – Manggopoh
21. Link No. 027.0 Lb. Alung – Kuraitaji
20. Link No. 002.0 Lb. Alung – Sicincin
14. Link No. 017.1 Painan – Kambang
12. Link No. 017.2 Kambang – Indrapura
7. Link No. 019.0 Indrapura – Tapan
MARCH 2011


IBRD 38339
INDONESIA
WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT (WINRIP), BENGKULU
PROJECT PHASES:
YEAR 1
YEAR 2
YEAR 3
0 20 40 60 Kilometers
This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.
THAILAND
MALAYSIA
BRUNEI
PHILIPPINES
PACIFIC OCEAN
SINGAPORE
KALIMANTAN
SULAWESI
SERAM
IRIAN JAYA
PAPUA NEW GUINEA
I N D O N E S I A
JAKARTA
JAWA
FLORES
BALI
TIMOR-LESTE
INDIAN OCEAN
AUSTRALIA
BENGKULU (Area of main map)
SUMATERA BARAT (see 38338)
LAMPUNG (see 38340)
101°E
102°E
103°E
3°S
4°S
5°S
SUMATERA BARAT
JAMBI
SUMATERA SELATAN
BENGKULU
LAMPUNG
INDIAN OCEAN
Batas Sumbar
Lb. Pinang
Mukomuko
Penarik
Bantal
Ipuh
Sukabaru
Seblat
Ketenong
Renajaya
Muaraaman
Napalputih
Atastebing
Bk.Berlian
Tes
Girimulya
Ketahun
A.Limas
Argamakmur
Curup
Tj.Sanai
Derati
Beringin III
Bintuan
Lais
Kerkap
Plajau
Permu
Ps. Pedati
Bengkulu
Kembangsari
Sukaraja
Sp.3 Ngalam
Pd. Capo
Pasartalo
Sp.Durianbudur
Bts.Sumsel
Maras
Keluntum
Sp. Pino
Pkl.Bengkerung
Batuampar
Kurawan
Manna
Sp.III Kayukunyit
Sp. Kedurang
Datarlebah
Tj. Kemuning
Ma.Saung
Mentiring
Tanjung Iman
Bintuhan/ Linau
Bts.Lampung
18. Link No. 015.3 Mukomuko – Batas Sumbar
11. Link No. 015.2 Bantal – Mukomuko
4. Link No. 015.1 Ipuh – Bantal
16. Link No. 009.4 Seblat – Ipuh & Air Lalang and Air Guntung Bridges
19. Link No. 009.1 Lais – Bintuan
6. Link No. 010.0 Ps. Pedati – Kerkap
13. Link No. 006.1 Sp. Rukis – Tj. Kemuning
NATIONAL ROADS
PROVINCE ROADS
MAIN CITIES AND TOWNS
KABUPATEN CAPITALS
PROVINCE CAPITAL
KABUPATEN BOUNDARIES
PROVINCE BOUNDARIES
MARCH 2011


INDONESIA
WESTERN INDONESIA NATIONAL ROADS IMPROVEMENT PROJECT (WINRIP), LAMPUNG
THAILAND
MALAYSIA
SINGAPORE
BRUNEI
PHILIPPINES
PACIFIC OCEAN
SUMATERA UTARA (see 38332)
SUMATERA BARAT (see 38338)
BENGKULU (Area of main map)
LAMPUNG (see 38340)
JAKARTA
KALIMANTAN
SULAWESI
SERAM
IRIAN JAYA
PAPUA NEW GUINEA
JAWA
FLORES
BALI
TIMOR-LESTE
AUSTRALIA
INDIAN OCEAN
Java Sea
South China Sea
SOUTH SUMATRA
BENGKULU
LAMPUNG
BANDAR LAMPUNG
Kotabumi
Liwa
Metro
Kalianda
Mesuji
Pmt.Panggang
Mesuji E
Sp.Pematang
Wiralaga
Sp.Msj.B
Sp.Msj.D
Sp.Asahan
Rawajitu
Sp.Gd.Ajibaru
Sp.Penawar
Gd.Ajibaru
Srirejeki
Pakuanratu
Serupaindah
Tajab
Gd.Aji
Umbul Mesir
Bts.Sumsel
Sp.W.Tuba
Blambanganumpu
Sp.Tl.Randu
Sp.Unit VII
Teladas
Manggala
Panarangan Parjama
Negara Ratu
Sp.IV
Bj.Tenuk
Giham
Ketapang
Sp.Bjt.
Kasui
Banjit
Gn.Labuhan
Sp.Tujak
Dy.Murni
Gunungbatin
Seputih Surabaya
Sedewa
Bd.Abung
Sp.Kotabumi
Mandala
Bukitkemuning
Kelapa Tujuh
Tbg.Besar
Sp.Mataram
Ajikagungan
Bdr.Jaya
Kt.Gjh.
Raman Utara
Purbalingga
Gn. Sugih
R.Raya
Padangratu
Gd.Dlm.
Bumijawa
Hd.Mulyo
Sukadana
Tl.Jukung
Wates
Tj.Kari
Tegineneng
Kibang
Sribawono
Sp.Sribawono
Branti
Pg.Raharjo
Bd.Baru
Sukoharjo
Tl.Padang
Pringsewu
Gd.Tatakan
Sp.Tj.Karang
Wana
Sp.Kemuning
Lb.Maringgai
Bergen
Tj.Aji
R. Tijang
Sukabumi
Km 10.30
Jabung
Sukamara
Kedondong
Pardasuka
Hanura
See Inset
Babatan
Asahan
Wates
Pd.Cermin
Umbulbayur
Kt.Dalam
Palas
Sp.Kuripan
Putihdoh
Jr.Ringin
Napal
Sp.Kalianda
Blambangan
Ketapang
Gayam
Kunyir
Bakauhuni
Bengkunat
Sanggi
Wonosobo
Kota Agung
Suoh
Tekat
Ulubelu
Air Naningan
Ulusemung
Bungin
Pubung Tambak
Mutaralam
Sukabumi
Pagardawa
Kotabatu
Lombok
Melesom
Bts.Bengkulu
Pugung Tampak
Sp. Gn. Kemala
Krui
Biha
To Palembang
To Baturaja
To Manna
To Kotabumi
To Metro
To Bergen
To Kalianda
Jatimulyo
Bernung
Sp. Tj. Karang
Sp. Slt.
Agung
Sukabumi
Kurunganyawa
Sp. Pugung
Tl. Betung
Sp. Tiga
Pl. Panjang
Hanura
Sukamaju
Java Sea
INDIAN OCEAN
Selat Sunda
105°
106°
4°
5°
6°
104°
0 20 40 60 Kilometers
PROJECT PHASES:
YEAR 1
YEAR 2
YEAR 3
17. Link No. 061.1
Sp. Gn. Kemala – Pg. Tampak
including Way Taau Bridge
1. Link No. 053.0: Krui – Biha
9. Link No. 026.1
Rantau Tijang – Kota Agung
NATIONAL ROADS
PROVINCE ROADS
MAIN CITIES AND TOWNS
KABUPATEN CAPITALS
PROVINCE CAPITAL
KABUPATEN BOUNDARIES
PROVINCE BOUNDARIES
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MARCH 2011
IBRD 38340