

Program Design Document

**Pilot Program for Provincial Road
Improvement and Maintenance (PRIM)**

June 2013

ABSTRACT

This Program Design Document (PDD) proposes the use of Australia Indonesia Infrastructure Grant (AIIG) facility draw-downs to incentivise improved maintenance and associated good governance of provincial roads under a Provincial Road Improvement and Maintenance (PRIM) program. This would be piloted in Nusa Tenggara Barat (NTB). Working through existing government procedures, PRIM would improve the way provincial governments manage and maintain their networks on a sustainable basis, raise network quality, increase provincial budgeting for road maintenance and encourage public scrutiny of the effectiveness of maintenance planning and delivery. AIIG grants would be provided if maintenance works were verified as having been planned and carried out using agreed procedures and to agreed standards. The province would pre-finance its works program, and would receive AIIG grant contributions on successful compliance with program conditions.

PRIM's design draws lessons from previous donor-assisted programs, most of which focused on road reconstruction, rehabilitation and periodic maintenance. PRIM would be unique, however, in targeting routine maintenance, often neglected but most critical. Most programs have involved special implementation mechanisms and have helped improve institutional capacity through technical assistance (TA), planning tools and training; PRIM would carry more assurance of sustainability by giving incentives for better performance to existing institutions and improved procedures. PRIM would also stress transparency and would strengthen the role of public forums in holding the road agency accountable for its performance in achieving defined outcomes.

IndII has already supported preparatory work in NTB, and the province is keen on the concept. The existing provincial network is in relatively poor condition. Other provinces may join the program if the NTB experience succeeds.

The program in NTB would be completed in two stages: Stage 1, from 2013 to June 2015 (when current IndII and AIIG funding is due for renewal), would concentrate on improving institutional capacity and governance and introducing effective maintenance; Stage 2, from July 2015 to 2018, would continue and expand the maintenance and rehabilitation works. The decision to extend funding to Stage 2 would be made in early 2015 based on the progress and success of Stage 1.

The total estimated cost of the program in NTB is \$130 million, of which AIIG grants would provide up to \$52 million. This grant funding would be supplemented by \$15.3 million of IndII-supported TA with institutional strengthening, capacity building and program management support, including output verification and monitoring and evaluation (M&E). A further \$A2.5 million would be available as an incentive to strengthen planning, programming and budgeting (PPB) procedures and to engage with the public through an existing Road Traffic and Transport Forum (RTTF). The total Australian funding would be \$69.7 million, of which \$17.2 million (AIIG grant of \$11.4 million and AusAID TA of \$5.8 million) would be for Stage 1.

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Currency Equivalents:

Exchange Rate effective end of 2012: 1 Australian Dollar (A\$) = 10,000 Indonesian Rupiah (IDR)

Fiscal Year:

Indonesia: January 1- December 31

Australia: July 1- June 30

Acronyms and Abbreviations

A\$	Australian Dollars
ACAP	Anti-Corruption Action Plan
ADB	Asian Development Bank
AIIG	Australia Indonesia Infrastructure Grant
AIP	Australia Indonesia Partnership
AMDAL	<i>Analisa Mengenai Dampak Lingkungan</i> – Environmental Impact Assessment
APBD	<i>Anggaran Pendapatan dan Belanja Daerah</i> – Regional Development Budget
APBN	<i>Anggaran Pendapatan dan Belanja Negara</i> – National Development Budget
AusAID	Australian Agency for International Development
BAPPENAS	<i>Badan Perencanaan Pembangunan Nasional</i> - National Development Planning Agency
Bapedalda	Regional Environmental Agency
BI	Bank Indonesia
Bintek	<i>Direktorat Bina Teknik</i> – Directorate of Technical Affairs, DGH
BMW	Backlog and Minor Works
BOQ	Bill of Quantities
BPK	<i>Badan Pemeriksa Keuangan</i> – State Audit Board
BPKP	<i>Badan Pengawasan Keuangan Dan Pembangunan</i> – Finance and Development Supervisory Board
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
CPS	Country Program Strategy
DAK	<i>Dana Alokasi Khusus</i> – Special Allocation Grant
DFA	Direct Funding Agreement
DGFB, DJPK	Directorate General of Fiscal Balance, Ministry of Finance
DGH	Directorate General of Highways, Ministry of Public Works
DLI	Disbursement-Linked Indicator
DJPK	Director General of Fiscal Balance
DJPB	Directorate General of Treasury, Ministry of Finance
DPRD	<i>Dewan Perwakilan Rakyat Daerah</i> – Local Government Parliament
DPU	<i>Dinas Pekerjaan Umum</i> – Public Works Agency
EA	Executing Agency
EIRTP	Eastern Indonesia Road Transport Project
EMMP	Environmental Monitoring and Management Plan
EPBC	Environmental Protection and Biodiversity Conservation
ECOMAP	IndII's Compliance Strategy and Environmental Management Process
EIA	Environmental Impact Assessment
EINRIP	Eastern Indonesia National Road Improvement Project (of AusAID)
EIRR	Economic Internal Rate of Return
ESS	Environmental and Social Safeguards
FED	full engineering design
GoA	Government of Australia
Gol	Government of Indonesia
IA	Implementing Agency
IDR	Indonesian Rupiah
IEG	Infrastructure Enhancement Grant
IndII	Indonesia Infrastructure Initiative (of AusAID)
INKINDO	<i>Ikatan Nasional Konsultan Indonesia</i> – Indonesian Consultants' Association

INPRES	Presidential Instruction
IRI	International Roughness Index
KAT	Indigenous Vulnerable People
Keppres	<i>Keputusan Presiden</i> - Presidential Decree
KKBP	<i>Kementerian Koordinator Bidang Perekonomian</i> - Coordinating Ministry for Economic Affairs
KPK	<i>Komisi Pemberantasan Korupsi</i> – Corruption Eradication Commission
km	kilometres
LARAP	Land Acquisition and Resettlement Action Plan
LG	Local Government
LGDP	Local Government and Decentralisation Project
LKPP	<i>Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah</i> - Government Goods and Services Procurement Policy Institute
M&E	Monitoring and Evaluation
MDB	Multilateral Development Banks
MoF	Ministry of Finance
MoHA	Ministry of Home Affairs
MoT	Ministry of Transportation
NPPH	On-Granting Agreement
NPV	Net Present Value
MPW	Ministry of Public Works
NTB	Nusa Tenggara Barat
OE	Owner's Estimate
PBC	Performance-Based Contract
PDD	Program Design Document
Perda	Regional Regulation
Perpres	<i>Peraturan Presiden</i> - Presidential Regulation
PG	Provincial government(s)
PIU	Provincial Implementation Unit
PIUC	Provincial Implementation Unit Consultant
PLWHA	People Living with HIV/AIDS
PMC	Program Management Consultant
PMM	Program Management Manual
PPB	Planning, Programming and Budgeting
PRIM	Provincial Road Improvement & Maintenance
RENSTRA	Strategic Plan
RK	Special Account
RKUP	Special Regional Account
RM	routine maintenance
RoW	right-of-way
RPFMU	Road Preservation Fund Management Unit
RPIJM	<i>Rencana Program Investasi Jangka Menengah</i> - Planned Medium Term Investment Program
RPJMN	National Medium Term Development Plan
RPJPD	Regional Long-Term Plan
RTTF	Road Traffic and Transport Forum
RUC	Reference Unit Costs
SBU	<i>Standar Biaya Umum</i> – General Standard Prices
SC	Steering Committee
SEC	Standard Environmental Clauses
SKPD, Satker	<i>Satuan Kerja Perangkat Daerah</i> – a Unit of Provincial Government

SOPs	Standard Operating Procedures
SOR	Schedule of Rates
SPPH	Grant to Province
SPPL	<i>Surat Pernyataan Kesanggupan Pengelolaan Dan Pemantauan Lingkungan Hidup</i> - Letter of Statement to Manage and Monitor the Environment.
TA	Technical Assistance
TFA(C)	Technical and Financial Assessment (Consultant)
ToR	Terms of Reference
TT	Technical Team
TVR	Technical Verification Report
UKL	<i>Upaya Pengelolaan Lingkungan</i> - Environmental Management Plan
UPL	<i>Upaya Pemantauan Lingkungan</i> - Environmental Monitoring Plan
UPTD	<i>Unit Pelaksana Teknis Daerah</i> – Technical Service Unit
VAT	Value Added Tax
VOC	vehicle operating cost/s
WB	World Bank

1 EXECUTIVE SUMMARY

1.1 The provincial road maintenance problem in Indonesia

1.1.1 The state of provincial roads

Roads in Indonesia carry 70% of all freight-tonne-km and 82% of passenger-km. Of the countrywide network of 477,000 km in 2010, 49,000 km were provincial roads and 385,000 km district roads. Provincial roads carry about 19% of all vehicle-km and provide vital links between district and national networks.

86% of national roads were in good or fair (stable) condition in 2010, but for provincial roads this proportion was only 63%. Their condition is not improving – indeed in many provinces it has worsened, including Nusa Tenggara Barat (NTB) where IndII proposes to pilot the Provincial Road Improvement and Maintenance (PRIM) program.

1.1.2 Why are provincial roads in poor condition?

The state of provincial roads is the result of poor-quality construction and lack of maintenance. Even with recent increases, budgets for road works as a whole are inadequate and tend to be allocated to capital projects with higher visibility, while maintenance – especially routine maintenance¹ – is neglected. Projects are not always chosen using rational, needs-based criteria. Work is often poorly specified and supervised. Public works agencies have limited capacity; their staff are poorly trained. Corruption is not uncommon.

These problems stem fundamentally from a lack of incentive for effective governance. Road agencies are not held accountable for their performance in managing the network efficiently. They are not pressured by public scrutiny to set the right priorities and produce better outcomes. There is no check on whether they deliver value-for-money, nor sanction if they fail to do so.

As a result roads deteriorate prematurely, eventually requiring much more expensive rehabilitation or reconstruction. The Government (GoI) gets poor value from its expenditure. The costs incurred by road users are much higher than they need be, undermining GoI's social and economic development efforts.

1.2 Past efforts to address the problem

GoI and its aid donors have tried to address the problem for years. Typically, the approach has been through loan-funded interventions, supported by technical assistance (TA) and training, including planned and supervised rehabilitation projects, provision or upgrading of equipment, workshops and/or laboratories, and assistance to local consultants. Delivery has usually been through special-purpose implementation units which require staff and budgets to be assigned for the project's duration. Monitoring has tended to concentrate on technical delivery, project impacts (mostly user cost and travel time savings, and improved safety), project management and staffing, and compliance with environmental and social safeguards. Pre-conditions for loan effectiveness or

¹ Routine maintenance involves the much more humble but necessary tasks of clearing drains, cutting grass and repairing potholes and shoulders.

disbursement have usually included government promises of subsequent maintenance. Yet experience consistently shows that improved road conditions and institutional performance have rarely been sustained. The promised routine maintenance rarely materialises.

AusAID's current Eastern Indonesia National Road Improvement Project (EINRIP) is tackling sustainability by raising standards of design and supervision and introducing rigorous safety, technical and financial audits to ensure that road improvements are delivered with longer-lasting initial quality. Even so, there is no inbuilt incentive for the improved roads to be well maintained afterwards.

Prompted by GoI concerns about the effectiveness of expenditure by local governments, recent efforts under the World Bank (WB) Local Government and Decentralisation Project (LGDP) have used the DAK (*Dana Alokasi Khusus*, or Special Allocation Grant) transfer mechanism to incentivise better local government performance in technical project delivery and financial management, with disbursements conditional on satisfactory physical output. LGDP, which is still under implementation, demonstrated the willingness and capacity of local governments (LG) to participate in the program, even with a loan inducement equivalent to only 10% of each LG's DAK allocation. However, LGDP did not cover routine maintenance (the key focus of PRIM to avoid the expensive build-deteriorate-rehabilitate cycle) and some problems were encountered in verifying technical quality of outputs during implementation². None of these initiatives, though, carry any guarantee that roads, once improved, would remain in good condition through effective maintenance. None contain any carrot or stick to ensure that the network is managed better on a sustainable basis in the interests of users and the public.

1.3 GoI strategies and initiatives

The Directorate General of Highways (DGH), part of the Ministry of Public Works (MPW), has a responsibility to help ensure better-quality sub-national (provincial and district) roads; this is one of its five main objectives for 2010-2014. But its attempts to improve road maintenance – on national and sub-national roads alike – have rarely been successful, mostly because its efforts have largely focussed on reconstruction and rehabilitation. Other countries have successfully outsourced responsibility for network management using output- or performance-based contracts. These have been tried in Indonesia, but with mixed results.

The Road Traffic and Transport Law 22/2009 illustrates GoI's concern about the state of road infrastructure. Initiated by the Ministry of Transportation (MoT) – which has no direct responsibility for roads and their maintenance – it contains several provisions designed to improve road conditions: road agencies are to be held liable for accidents arising from a failure to maintain adequate standards; dedicated road funds are to be established to secure adequate resources for road maintenance; and Road Traffic and Transport Forums (RTTFs) are to be set up at national, provincial and city/district levels – reporting directly to the Governor in the case of provinces – to help ensure more effective planning and delivery of road infrastructure, traffic and transport services. Their membership brings together civil society, concerned government agencies and road users.

² These have been overcome with the PRIM verification and incentive scheme.

1.4 Lessons for PRIM's design

The lesson from past experience is that short-term inputs of TA and other resources to assist road maintenance, whether for planning, design, execution or institutional strengthening, will likely have little lasting impact unless their influence can be institutionalised and made part of the agency's everyday activities. This means locking rational planning tools into the process of setting expenditure priorities and budgeting, and holding the road agency accountable for getting value-for-money from its allocated budgets and for its performance in managing the network. It means incentivising the road agency, its consultants and contractors to perform – and also compelling them to do so, using both contract sanctions and the pressure of public scrutiny. And it requires, for the design of a pilot program like PRIM, a greater focus on sustainable improvements in governance than on physical output.

1.5 A new approach under PRIM

PRIM's design reflects the lessons learned from this earlier experience, including EINRIP and LGDP. Unlike efforts before, its focus is on maintenance rather than reconstruction, rehabilitation or network capacity expansion, and it would use conditions attached to AIG grant support (and hopefully other forms of central government assistance in future) to strengthen governance on a more sustainable basis.

Focusing on routine maintenance, which is almost completely neglected at present, PRIM would incentivise provincial road agencies to achieve improvements in both physical results and program governance. It would provide grant contributions of up to 40% of maintenance expenditures if the completed works were verified as having met agreed technical and planning, programming and budgeting (PPB) performance indicators³. It would also provide up to 5% of additional grant to reward improved institutional performance. To help ensure sustainability it would work through, and in the process strengthen, existing government procedures, using local consultants for design and supervision and local contractors for implementation. By raising the role, profile and capabilities of the provincial RTTF, it would hold the road agency openly accountable for its performance. It would introduce objective PPB procedures and reward their permanent adoption as part of the annual planning cycle. It would also include strong anti-corruption incentives.

1.6 Why focus PRIM on provincial roads?

Provincial roads link national and district roads. They carry a fifth of the total demand. The provinces responsible for these roads usually have greater capacity than at the district level. Piloting the program at the provincial level has a greater chance of success.

³ The 40% grant level was chosen to provide a meaningful incentive to participate in the program. Experience under the World Bank's Eastern Indonesia Road Transport Projects, EIRTP-1 and EIRTP-2, showed that most sub-national governments withdrew when the WB contribution was less than 30% of costs incurred. In the IndII-funded Water and Sanitation Initiative, the grant forms about 40% of total cost for the water component and 60% for the sanitation component.

1.7 Why NTB for the pilot program?

NTB's provincial road network of 1,772 km is urgently in need of better maintenance: only 49% of its length is in stable condition. In 2010 and 2011 IndII helped prepare a maintenance program for NTB using improved PPB procedures and explored the potential for incentivised, results-based delivery. The Provincial Government showed strong interest and recognised improved governance as its main focus. The Governor and Provincial Parliament (DPRD) authorised multi-year funding and works contracts to facilitate implementation. NTB has already established an effective RTTF and increased its 2012 road maintenance budget. In February and March and again in August, September and October 2012 it urged DGH and IndII to speed up implementation of PRIM. NTB is also one of the poorest provinces in Indonesia.

If the pilot program succeeds in NTB it could be expanded to other provinces and, eventually, applied to the district road system. Later stages of the pilot program in NTB could include one or more districts. The National Development Planning Agency (Bappenas), Ministry of Finance (MoF) and DGH all wish to expand PRIM

The intention is that AIIG grants would in the future be replaced by central government grants. The mechanism will be tested in the NTB pilot program. It is too early to say what form these central grants might take, but already Bappenas and MoF are attracted by PRIM's output-based approach and are understood to be considering comparable revisions to the DAK grant process used for capital projects.

IndII is already engaged with the Ministry of Transport (MoT) in preparing its RENSTRA 2015-2019 Strategic Plan, DGH in preparing its part of the MPW RENSTRA, and Bappenas in drafting the higher-level, long-term planning framework, RPJMN (the Government's long-term strategy). In each case, IndII's advisors will try to ensure that PRIM's objectives and incentive-based procedures are written into the policies governing these documents.

1.8 The proposed PRIM approach

1.8.1 Objectives

The program's objectives would be to achieve lasting improvements in governance and value-for-money in rehabilitating and maintaining provincial roads in NTB, raising the quality of maintenance planning and delivery. Performance would be rewarded by grant disbursements triggered by satisfactory execution of maintenance works in accordance with agreed procedures and standards, and improvements in governance measured by specific indicators of progress and outcomes.

The key to achieving PRIM's objectives is a results-based, grant-supported approach – with AIIG contributions eventually replaced by central government transfers – to incentivising better road maintenance performance. An important outcome would be better-quality roads, providing better connectivity for users on a sustained basis.

1.8.2 Components

The PRIM pilot program in NTB would have two main components:

- **Component 1:** Payment (up to \$52 million of the AIIG facility) of a proportion of verified maintenance expenditures⁴. With IndII and AIIG funding only authorised to June 2015, the program would be in two stages: Stage 1, with guaranteed funding, from 2013 to 30 June 2015, and Stage 2, with as yet no guarantee of further funding, from July 2015 to June 2018. Stage 1 would consist of about 1,329 km-year of routine maintenance, 679 km of backlog and minor works, 26 km of periodic maintenance and 18 km of rehabilitation (Table 1.1).
- **Component 2:** Improved governance, using up to \$2.5 million in AIIG grant support as an incentive (a) to prepare and prioritise annual work programs with progressively less assistance from consultants, (b) to undertake training under PRIM and (c) to strengthen transparency and accountability in program planning and delivery through the involvement of an empowered RTTF. Of the \$2.5 million allocated for 2013-2018, \$1.0 million would be disbursed in Stage 1.

Table 1.1: Maintenance modality and output by Stage

(km)

Maintenance type	Modality	Stage 1	Stage 2	Both Stages
Routine maintenance (RM)	Contract	387	TBD ¹	TBD
	Swakelola	942	TBD ¹	TBD
	Total RM	1,329	1,329	1,329
Backlog & Minor Works (BMW)	Contract	679	0 ²	679
Periodic maintenance	Contract	26	277	303
Pavement rehabilitation	Contract	18	149	167

¹ The split of routine maintenance in Stage 2 between swakelola and contract would be guided by evaluation of performance of these modalities in stage 1.

² The totality of BMW would be implemented in Stage 1 (2014).

During Stages 1 and 2, PRIM would also provide TA covering institutional strengthening, program support, M&E and verification of outputs: \$15.3 million in AusAID TA funding through IndII, of which \$5.8 million would be in Stage 1. This assistance would include (a) training for road agency, planning and environmental staff and contractors and consultants in NTB, (b) support for the RTTF, (c) assistance to a DGH technical team (TT) and a NTB program implementation unit (PIU), and (d) M&E of the pilot program.

The total estimated cost of the program (both stages) is \$147.6 million; Stage 1 is \$32.8 million (Table 1.2). These include a quantity contingency of 5%, price escalation at 5% a year, and taxes at

⁴ The works would include routine maintenance carried out by force account (*swakelola*) and contract, backlog and minor works, periodic maintenance and rehabilitation, and road safety measures. Rehabilitation is necessary on some stretches of road to bring them to a stable, maintainable state.

10%. They do not include the cost of consulting services for engineering designs for Stage 2 (July 2015-2018), nor the cost of supervision during 2013-2018: these would be borne by NTB.

Table 1.2: : Summary of cost of PRIM by component and Stage

(million A\$)

Component	Stage 1 2013-mid-2015		Stage 2 mid-2015-2018		Total 2013-2018	
	Total	PRIM	Total	PRIM	Total	PRIM
Component 1: Works	20.8	8.3	73.6	29.4	94.4	37.7
Component 2: Institutional Incentive	1.0	1.0	1.5	1.5	2.5	2.5
Technical Assistance	5.0	5.0	7.0	7.0	12.0	12.0
Subtotal Cost in end of 2012 prices	26.8	14.3	82.1	37.9.0	108.9	52.2
Physical contingency	1.0	0.4	3.7	1.5	4.7	1.9
Price contingency	2.1	1.0	18.7	8.4	20.8	9.4
VAT	2.9	1.5	10.3	4.7	13.2	6.2
Total	32.8	17.2	114.8	52.5	147.6	69.7

NTB would pre-finance and implement the physical program. PRIM would grant up to \$52 million (2013-2018) – about 40% of the cost of the verified works – as an incentive to improve road maintenance in compliance with the agreed PPB procedures and verification standards (Component 1 above). The expected cost of works for Stage 1 is \$26.0 million, including contingencies and taxes; the corresponding AIIG grant would be \$10.4 million.

The total AIIG grant would be about \$54.5 million, comprising \$52.0 million for physical works and \$2.5 million as institutional incentive.

The total Australian contribution for Stages 1 and 2 would be \$69.7 million. For Stage 1 it would be \$17.2 million: a \$10.4 million AIIG contribution for physical works, a \$1.0 million AIIG contribution as institutional incentive, and a \$5.8 million contribution from AusAID for supporting TA, supplied through IndII.

1.8.3 Monitoring and evaluation

The M&E system would focus on improved governance, contractor performance and the completion of physical works to specification. Provisional performance indicators have been prepared for each of these. The M&E framework would be implemented by a consultant funded by IndII. This consultant would prepare the detailed M&E design, implementation plan and schedule; carry out baseline studies; conduct periodic reviews of progress and prepare an annual M&E report.

The M&E report to be produced in early-2015 would help decide whether there would be a PRIM Stage 2 in NTB or if PRIM should be extended to other provinces or districts and identify the changes, if any, to be made in PRIM's design. It would have a strong focus on governance

performance indicators and would review the role of the PIU/PIUC in implementing PRIM in NTB and possibly other provinces.

1.8.4 Output verification and disbursement

Verification of technical and governance outputs is the basis for approving grant disbursements. It would be done independently of the parties involved. The process has been developed with MoF, Bappenas, DGH and the NTB provincial government, and meets the requirements of Government Regulation 2 of 2012.

DGH would represent the technical Ministry (MPW) required to carry out verification. Its TT, supported by the PMC, would verify final outputs and also carry out technical and financial assessments (TFAs) prior to completion to reduce the probability of works failing verification. Verification would cover three disbursement-linked indicators:

- Maintenance works programming: This would confirm that the annual works program is based on approved PPB procedures, the proposed works are in the provincial budget, and the maintenance budget is announced on a website. Further, to meet Gol's requirement that disbursements are made against physical outputs, the following additional requirements are to be met: implementation of the agreed training program on schedule; contracts for major works (periodic maintenance and rehabilitation) signed and advance payments paid; and routine maintenance by *swakelola* being planned and implemented for at least 3 months. Once the program is verified, a payment of up to 5% of the grant contribution to the cost (or 2% of the cost of the agreed work program for Stage 1) can be disbursed;
- Physical works implementation: This would confirm completion of physical output and compliance with technical specifications, procurement guidelines and environmental and social safeguards. Works that are verified would be eligible for disbursement of up to 95% of the grant contribution to the cost (or up to 38% of the cost of the agreed program for Stage 1); and
- Improved institutional performance: This would confirm NTB's ability to prepare the annual work programs with reducing external assistance, adopt standard operating procedures (SOPs) by the RTTF, hold public forums and consultations and disseminate the results to the public, and successfully implement the agreed training and manpower development program. Again, to meet Gol's requirements for disbursement, the following will also have to be met: routine maintenance budget included in the provincial budget (APBD) and the agreed routine maintenance program implemented.

Output values for completed and verified works are calculated as the product of the length of any work and the reference unit cost (RUC) for that work⁵. RUCs have been set for 2013 on a per-km basis for annual routine maintenance (improved *swakelola* and contract), minor reinstatement and new minor works, periodic maintenance and pavement rehabilitation. They were developed in cooperation with NTB and are approved by DGH. RUCs reflect market costs and would be updated annually. For each disbursement, the Verifier (DGH/TT/PMC) would prepare a Technical Verification

⁵ A multiplication factor would be applied to non-standard pavement widths in the case of periodic maintenance and rehabilitation, where the factor is the ratio between the actual length-weighted average pavement width and the pavement width of the applicable RUC.

Report (TVR) for submission to MoF, copied to IndII, with details of the RUC-based calculations and supporting documents.

A Direct Funding Agreement (DFA) would be signed by GoI (MoF) and AusAID. An On-Granting Agreement (NPPH) would be signed by GoI (MoF) and NTB after MoF issues approval of the Grant to the Province (SPPH). MoF would establish a Special Account (RK) in Bank Indonesia (BI), to which the grant funds would be transferred. As agreed with MoF, for the first stage (until June 30, 2015) these would be transferred to the Province's General Account (RKUD) following four verification processes against approved TVRs: the first covering program disbursements (maximum of 5% of AIIG grant); the second covering up to 20% of AIIG grant and 50% of the incentive for improved institutional performance, and requiring that cumulative progress of verified physical works is 25%; the third covering up to 40% of AIIG grant and requiring that cumulative progress of verified physical works is 65%; and the fourth covering up to 35% of AIIG grant and the remaining 50% of incentive for improved institutional performance, and requiring that cumulative progress of verified physical works is 100%. The disbursement details for Stage 2 (July 2015-2018) would be agreed between MoF and AusAID/IndII once the decision to proceed with Stage 2 has been made and AIIG grant funds for Stage 2 become available.

1.8.5 Implementation arrangements

Implementation arrangements have been agreed with GoI agencies and NTB provincial government (see on page 41). The Implementing Agency (IA) would be the provincial government, through the regional development planning agency, Bappeda. The PIU has already been established by decree of the Governor, with the Public Works Agency (DPU) a key member. The PIU and DPU would be supported by the PIUC, engaged by IndII, who would also assist in institutional strengthening and training. PIU/PIUC, through the DPU, would help procure design and supervision consultants and contractors, and mentor and manage the *swakelola* works program. The PIU/PIUC would also support the RTTF.

The Executing Agency (EA) would be DGH. The TT has already been established by decree of the Director General, who issued the Project Management Manual (PMM) on 29 April 2013. TT members include staff of the Directorates of Planning, Technical Affairs and Implementation Region 2 (designated the lead executing agency), and MPW's Inspector General. The TT would be supported by the PMC, engaged by IndII, who would help oversee the program and carry out verification and TFA during implementation of works.

A high-level Steering Committee (SC) would be established with Bappenas as chairperson and representatives of MoF, DGH, MoT (Directorate General of Land Transportation), and Ministry of Home Affairs (MoHA) as members. Bappenas has already taken steps to appoint DGH as the EA and to initiate the TT in DGH and the PIU in the province. The SC would also be supported by the PMC, who would carry out technical assessments and verification. M&E of the program would be carried out independently by an IndII appointed consultant.

1.8.6 The role of the RTTF

The RTTF would play a key role under PRIM, improving governance and transparency by addressing matters of public concern and putting pressure on the road agency (DPU) to plan and deliver an

effective maintenance program. The NTB RTTF was established by Governor decree in November 2010, tasked with resolving road traffic and transport problems, coordinating the relevant provincial agencies and reporting the results to the Governor. Chaired by the Governor himself, its membership includes the heads of provincial public works, police and land transport agencies, representatives of transport operators, a university representative, experts in transport, a NGO representative with a focus on transport and a transport observer. PRIM would strengthen its role in handling complaints from the public and improving governance and transparency by scrutinising DPU's plans and programs. PRIM's support to the RTTF would include helping it to raise the public's awareness of road maintenance issues and the RTTF's role through SMS messaging, website development, and community meetings on plans and projects (e.g. on overall works priorities, as well as on local project-related issues like access to properties, continuity of drainage systems, etc.). PRIM would also help the RTTF deal with cross-cutting issues like equitable access to transport for the disabled and to report on management of community complaints. A training program for RTTF members would be developed based on a training needs study carried out under PRIM.

For the RTTF to be effective in the role envisaged for PRIM, the individual members need to be carefully briefed, trained and provided with standard operating procedures (SOPs) that make clear its role as a public forum operating at arm's length from government. However, there is a potential concern that the RTTF will be perceived, in the eyes of the public (and possibly even among RTTF members), as a non-independent, government-sponsored entity with no ability to achieve meaningful change in program governance. If this view persists, IndII will explore through consultation alternative ways of establishing arm's-length pressure on the provincial government to set the right planning priorities and achieve effective execution of road maintenance. This might, for example, involve NGOs, other community pressure groups or the local press; the decision can only be made once the arrangements for public participation and open governance are trialed in the pilot program.

1.8.7 Incentivising performance

The results-based, grant-incentivised approach is the most important innovation in PRIM's design. No comparable programs have used this approach before. A key ingredient in changing behaviour on a sustainable basis is having the RTTF provide effective external oversight and demand greater transparency about plans and performance. PRIM would provide financial incentives to induce institutional change and training; its support for the RTTF would make their influence more effective. It would also engage an independent third party to verify that completed works meet agreed criteria, and incorporate incentives to reduce the chances of fraud and corruption. Further, PRIM has been designed to be sustainable through its emphasis on working through and strengthening existing government systems and procedures, using local consultants and contractors, training provincial staff and increasing the pressure of accountability for performance.

1.8.8 Schedule

NTB wants to proceed with PRIM as soon as possible. The TT and the PIU have already been appointed. Procurement of the PIUC and PMC has already started, with the PIUC contract expected by July 2013 (see on page 45) and the PMC contract by October 2013. Detailed engineering designs

and bid documents for Stage 1 works are expected to be completed by October 2013⁶. Contractors are expected to be selected by December 2013. Works by contract would be completed by June 2015 for Stage 1. The first disbursement from the AIIG grant is expected in December 2013. The DFA between AusAID and MoF is expected to be signed by September 2013 and the NPPH between MoF and NTB by October 2013.

1.8.9 Economic evaluation

An economic evaluation has been carried out for Stages 1 and 2 separately and for the two combined. For Stage 1 it was carried out for each sub-project. Packages in Stage 1 were confirmed by NTB DPU as priority links. Estimated user benefits consisted of savings in vehicle operating costs (VOCs) and user time costs, both a function of traffic volume and composition and road roughness. The net present value (NPV) and economic internal rate of return (EIRR) were calculated using HDM-4, calibrated for local conditions.

The estimated EIRR for the seven packages of major works (periodic maintenance and rehabilitation) in Stage 1 was 88% (NPV \$12.5 million) with all links and packages delivering positive NPVs. The EIRR for Stage 2, and those links which are subject only to routine and minor works contracts and swakelola in Stage 1, is estimated at 99% (NPV \$31.0 million). For the full PRIM the EIRR is 98%, and NPV \$43.5 million. PRIM also delivers net road agency cost savings of about \$25.3 million through the application of more efficient maintenance strategies.

The economic evaluation would be repeated each year, and sub-projects to be included in Stage 2 would be selected based on its results.

1.9 Cross-cutting issues

1.9.1 Poverty

PRIM is not specifically directed at the poor, but improved all-year reliability of access resulting from the program would benefit the whole population including the poor, who would have better access to services and markets. Improved road conditions would reduce transport costs and together with better year round access would reduce the costs of basic needs, facilitate public transport and help improve access to health, education and other social activities, as well as income-earning opportunities.

Improved routine maintenance would increase the use of labour where it has advantages over equipment, increasing employment opportunities, including for the poor.

Improved road conditions and PRIM's attention to road safety are also expected to reduce the risk of fatalities, personal injuries and property damage. This is especially important to the poor and near-poor who are most vulnerable to the economic shock of traffic accidents.

⁶ The DPU has already commissioned local consultants to make a start on this design work. These will be reviewed by IndII consultants in June-August 2013. If, even with some modification, they provide a satisfactory basis for contract documentation, then this program can be brought forward. This would allow contracts to be let in two tranches, one of which would be in 2013, with benefits in terms of the schedule of payment and reducing the risk of collusion associated with the alternative of bidding seven contracts at once.

1.9.2 Gender

Gender equality is addressed by PRIM. Contractors and consultants would be required to show the numbers and positions of women and men in their teams. The RTTF would monitor gender equality. Women from local communities might be attracted to the Road Inspector position, which would not require them to travel far from home. Training would be provided for these positions, after socialisation to create awareness of the opportunities and related safeguards.

1.9.3 Disability

The provincial road network is mainly rural, so only limited opportunities may become available to improve access for people with disabilities. However, engineering designs will give special consideration to gender, child protection and disabled persons (for example to facilitate pedestrian, handicapped and public transport access). Already, following a review of preliminary designs prepared for the first round of contracts, a semi-urban section of road has been singled out for special treatment to ensure that these human needs are properly addressed in an early demonstration of the appropriate approach.

1.9.4 HIV/AIDS and Child Protection

PRIM would involve relatively small-scale, short-term maintenance work. This does not allow sufficient time for meaningful and sustained HIV/AIDS interventions. Further, most contractor and *swakelola* personnel are expected to be local (i.e. not the mobile men with money who visit for big-ticket projects). Moreover, NTB has a low incidence of HIV/AIDS relative to other provinces. It is considered best to address HIV/AIDs through a more appropriate mechanism than PRIM where it can be dealt with comprehensively.

PRIM does not specifically address child protection, but the PIUC will help ensure that bid and contract documentation and works supervision procedures expressly prohibit exploitation of child labour, and that work-site protection arrangements ensure the safety of children and other pedestrians (with specific protection measures being mandated in the vicinity of schools and medical facilities).

1.9.5 Corruption

Measures under PRIM to reduce the risk of corruption include an anti-corruption action plan (ACAP) which provides for engagement of an independent assessor for oversight of performance, hiring an independent PMC, support for the RTTF and, of course, the threat of non-reimbursement from the AIIG facility. The RTTF, with its focus on transparency and involvement of civil society, would help deter bribery and poor work quality. The grant agreement would include a mechanism for recovering funds from NTB if there is evidence of ineligible expenditure after the grant has been disbursed.

Section 6.5 of the PMM describes the ACAP and identifies that an Independent Assessor, provided by funding from AusAID, will be responsible for monitoring and assessing the program implementation. A primary task for the PMC is to carry out comprehensive independent technical and procurement assessments of PRIM performance and consequently they will perform the role of the Independent Assessor.

1.9.10 Environmental and social safeguards

Most of PRIM's sub-projects involve small-scale works within the existing right-of-way (RoW). (PRIM with its emphasis on maintenance will exclude environmental category "A" sub-projects). They are unlikely to have significant environmental impacts. Standard contract clauses for environmental protection should suffice in most cases.

Draft Environmental and Social Safeguards (ESS), part of the PMM, have been prepared which outline requirements for PRIM implementation. This document complies with IndII's Environmental Compliance Strategy and Environmental Management Process (ECOMAP 2010) and AusAID's Environmental Management System (Environmental Management Guide for Australia's Aid Program 2012).

1.10 Partner agency commitment

Both DGH and MoF's Directorate General of Fiscal Balance (DJPK) have participated in the program's design. DGH has established the TT to support program preparation and implementation. DGH is committed to PRIM and the concepts which underpin it.

The Provincial Government is also committed, and understands the program's objectives. The DPU was involved with the 2010 and 2011 IndII studies and with preparing the current program. The NTB Government has made important commitments to ensure that the program can be supported by provincial budgets for the program's duration. The Governor has written to Bappenas and MoF committing to PRIM implementation. He would also issue by August 2013 a provincial regulation (*Perda*) confirming the annual budgets for PRIM during 2014-2018.

1.11 Risk management

PRIM promotes greater accountability and incentivises better performance. The approach needs to be well-communicated and given time to work. The benefits of better roads should far outweigh the risks of innovation. These risks have been identified and mitigation measures included in the Program Design.

The Contractor would be responsible for completing works to specification. If poor-quality work is accepted by the supervisor, the risk shifts to the Provincial Government, which would not receive the full grant amount if the TVR rules that the work has not been properly carried out: the Provincial Government would thus have a greater incentive to ensure that the contractor and supervisor perform well.

Incentives and sanctions for consultants and contractors to perform well were considered. Financial incentives are difficult to administer and audit. Financial sanctions for contractors were also considered and deemed administratively difficult too. However, there is a case for penalizing supervision consultants for approving works which do not get verified. This will be discussed with NTB and DGH at the time of drafting requests for proposals, and if approved, at pre-bid briefings. Also, contractors and consultants who do not perform well could be blacklisted or forbidden from bidding for a period of time. Consultants and contractors would be briefed to expect that good performance will improve the prospect of winning future bids.

A high risk is that provincial financing will not be provided in the right amounts or at the right time and that major works will be preferred to routine maintenance. In that case road conditions would continue to worsen. PRIM gives priority to routine maintenance. The funds required for 2013-2015 were considered in developing the maintenance program. The Governor would issue by August 2013 a provincial regulation concerning the annual budgets committed to PRIM in 2014-2018.

Another high risk relates to possible slippage in the PRIM timetable. The schedule is tight – see Section 1.8.8 – and any significant delays could rule out the possibility of getting contract works underway in 2013. From past experience, delays in project completion are common. PRIM includes TA services (interim support consultants as well as the PIUC and PMC) to expedite implementation, including assistance to RTTF and preparation of training needs study, engineering designs and bid documents. Procurement by NTB will not be subject to “no objection” from IndII. The NTB government and DPU want to start implementation as soon as possible. IndII and AusAID will help address any problems that might slow decision-making and implementation.

A further risk pertains to fluctuations in the exchange rate of the Australian Dollar versus the Indonesian Rupiah. PRIM was prepared assuming 1 Australian Dollar is equivalent to IDR 10,000. However, the Australian Dollar has lost value recently and there is risk of further drops. This risk can be addressed by either increasing the amount of the AIG grant, or reducing the contribution to civil works from 40%, or reducing the overall size of PRIM.

Ever-present risks relate to procurement and supervision. IndII would ensure the integrity of verification by selecting independent reviewers (technical and financial auditors other than PMC). The services of these reviewers would be needed once (around July/August 2014) in Stage 1.

1.12 Relationship with AusAID’s Country Program Strategy (CPS)

The proposed pilot program supports and is consistent with the AusAID CPS, particularly Pillar 1: reduced constraints to infrastructure and productivity growth. The CPS states that the Australia Indonesia Partnership (AIP) will give priority to complementing GoI expenditure on infrastructure rehabilitation and development in priority provinces, particularly in improving connectivity to facilitate economic growth. The proposed program would also support Pillars 2 (investing in people) and 3 (democracy, justice and good governance) by targeting improved all-weather access (poorer areas suffer mainly from reduced access) and more transparent budgeting and oversight.

There are also potential synergies between the piloting of a results-based approach in NTB and the broader ANTARA/AIPD AusAID program, whose three main objectives are to improve district and provincial governance, increase incomes for women and men, and improve quality of and access to basic services in Indonesia’s least developed provinces.

2 THE PROBLEM⁷

2.1 The condition of the network

Roads carry the main transport task in Indonesia, accounting for 70% of freight tonne-km and 82% of passenger-km in 2010. Of the total of 477,000 km throughout the country in 2010, some 49,000 km were provincial roads and about 385,000 km were district (*kabupaten* and *kota*) roads (Table 2.1). The provincial network connects kabupaten capitals and other economic centres within a province, and provides vital links between the kabupaten and national road networks.

The sub-national road network accounts for about 90% of the primary network, with provincial roads making up 9.7% in terms of two-lane equivalent and district roads 79.9%. Provincial roads carry 19% of the total vehicle-km of demand, but are in poorer condition than the national network. Whereas about 86% of national roads were in good or fair (stable) condition in 2010, only about 63% of provincial roads were in such condition.

Table 2.1: Indonesia's road network conditions, 2010

Road Class	Length km	% 2-lane equivalent length	% paved length	Asset value as % of GDP	Utilisation (% of total veh-km/yr)	% Good/Fair condition	% Poor/Bad condition
National	38,570	8.8	91	2.8	34	86	14
Provincial	48,691	9.7	81	2.3	19	63	37
District	384,810	79.9	55	10.1	33	43	57
Jakarta	6,266	1.3	79	0.3	10	64	36
Toll	742	0.3	100	0.1	4	96	4
Total	477,079	100	61	15.6	100	54	49

Source: DGH, BPS Central Statistics Bureau) and RNET as reported in the World Bank's *Road Sector Expenditure Review 2012: Investing in Indonesia's Roads – Improving Efficiency and Closing the Financing Gap*, Table 3, p. 22, June 2012.

According to data cited by the World Bank (WB), the condition of both provincial and district roads has not improved since decentralisation and has even deteriorated. The proportion of the provincial network in stable condition (good and fair) appeared to fall from 76.6% in 2001 to 62.0% in 2005, but rose again to 75.9% in 2009⁸ only to fall again subsequently. (It should be pointed that there are discrepancies in the data regarding condition of sub-national roads.)

⁷ For further details of the road maintenance issues addressed by PRIM, see Annex 1.

⁸ Source: World Bank, *Road Sector Expenditure Review 2012: Investing in Indonesia's Roads – Improving Efficiency and Closing the Financing Gap*, Table 7, p. 36, June 2012.

2.2 Inadequate maintenance

2.2.1 The problems

Several factors contribute to the state of the network:

- the funding allocations for road works as a whole are inadequate;
- the available funds tend to be concentrated on the more visible categories of project – new roads, road widening and rehabilitation – with little going to more urgently-needed maintenance;
- initial construction standards are poor, with works carried out by under-resourced and poorly-supervised contractors;
- the little maintenance work that is carried out, usually by *swakelola*, is unplanned and of poor quality;
- public works agencies, especially at the district level, have limited capacity and lack adequate training;
- since decentralisation, the standard technical assessment of sub-national road condition is no longer carried out, so it is no longer possible to develop maintenance programs based on an objective assessment of needs⁹.

Donor financed road maintenance and rehabilitation projects have attempted to address most of the above problems. They have funded capacity building, development of planning tools, equipment and workshops, works implementation and even betterment works that are conditional on GoI funding for routine maintenance programs. As shown later, however, these efforts were rarely successful.

Road maintenance, particularly routine tasks such as cleaning drains, cutting grass and repairing potholes, remains under-funded and poorly implemented. Lack of maintenance leads to premature deterioration of road assets and raises costs for users. Reconstruction becomes expensive. Road administrations at sub-national level are locked into an expensive build/reconstruct-deteriorate-rehabilitate cycle, with a preference for fixing the worst first and giving little attention to preventive maintenance.

Since local roads make possible the transport of goods and provide vital links to markets, services and employment, these problems undermine GoI's efforts to promote rapid, sustainable and inclusive development, particularly in non-urban areas.

2.2.2 The causes

The root cause of the problems outlined above is the absence of any incentive for effective governance. There is no mechanism for holding road agencies accountable for their performance in managing the network efficiently and in accordance with rational, needs-based plans. There is no pressure to set the right priorities and produce better outcomes. There is no check on whether they deliver value-for-money, nor sanction when they fail to do so.

⁹ Consequently, planning and budgeting responds to political pressure and manipulation, and emphasises highly visible projects, rather than the stability and quality of the road network as a whole.

As we shall see below, the lesson from past experience is that short-term inputs of TA and other resources to assist road maintenance, whether for planning, design, execution or institutional strengthening, will likely have little lasting impact unless their influence can be institutionalised and made part of the agency's everyday activities. Sensible planning tools need to be made a part of the process of assessing needs, setting expenditure priorities and budgeting. The road agency, its consultants and contractors need to be incentivised (and where necessary compelled) to raise quality standards and meet the needs of road users more effectively. For the design of a pilot program like PRIM, the lesson is that there should be a greater focus on sustainable improvements in governance than on physical output.

2.3 GOI sub-national road policies and initiatives

The GoI is aware of these problems, but is unsure how best to tackle them. Road Law 38/2004 requires all road authorities to give priority to road maintenance and maintain minimum service levels, but provides them with no mechanism for doing so. Later regulations have further emphasised maintenance, including MPW's Decree 13/PRT/M/2011 on Maintenance and Inspection of Roads. The current DGH RENSTRA (strategic plan) for 2010-2014 lists support for more effective management of sub-national roads as one of five key objectives.

A further indication of GoI's concern comes from Road Traffic and Transport Law 22/2009. Though initiated by MoT, which has no direct responsibility for roads and their maintenance, it contains several provisions designed to improve road conditions:

- it requires a Road Preservation Fund Management Unit (RPFMU) to be established under MPW to manage funds raised from users for road maintenance, rehabilitation and reconstruction; the RPFMU has not yet been established, however, due to lack of clarity about the source of funds and the mechanisms for applying user charges;
- it requires RTTFs, representing road users, including truck and bus operators, NGOs, industry, community groups, academics and the media, to be established at national, provincial and local levels to involve civil society in raising standards of delivery of road-related services, including maintenance; and
- it holds governments liable for accidents attributable to poor road conditions.

Before regional autonomy, central government imposed structure and discipline on sub-national planning and budgeting for roads, including maintenance. MPW Decree SK77/1990 required provincial and local governments to follow MPW procedures for data collection and analysis, planning, programming and design as part of their annual budget approval process¹⁰. With the advent of regional autonomy, however, sub-national roads became the responsibility of sub-national governments, and the role and authority of central government was substantially reduced. Compliance with SK77 has lapsed. Central government now lacks both the information and the authority to secure better road maintenance outcomes at the local level.

For RENSTRA 2010-2014 MPW devised minimum service standards for provincial and local governments. For roads, these cover accessibility, mobility and safety, and targets are set in terms of

¹⁰ Decree of the Director General of Highways, *Surat Keputusan* No 77/KPTS/Db/1990).

road conditions and speeds to be achieved by 2014. DGH has also been redrafting the SK77 guidelines and procedures for local road management. These would be formalised by decree. DGH's actions may have been prompted by adverse media coverage of the poor state of local roads and the recent collapse of a major new bridge in East Kalimantan causing loss of life. Even so, while commitment is building at the national level to improve maintenance of sub-national roads, any such efforts are likely to be in vain without a carrot-and-stick approach to incentivise local action.

One possible mechanism is through the system of conditional central government grants known as DAK (Specific Purpose Grant). DAK grants are allocated to finance specific investment projects carried out by local governments (LGs) that are aligned with national priorities. Now constituting 7% of all governmental transfers to LGs, the DAK started with five sub-sectors in 2003 and had expanded to 22 sub-sectors by 2011. Even so, several problems undermine its effectiveness, including poor coordination between the central government and LGs on priorities, low design standards, and lack of appropriate reporting and monitoring of DAK utilization, particularly verification of the quality of outputs funded. There has been some mismatch between grants allocated and local needs and priorities. Fragmentation has also been a problem, reducing the size of funds for specific investments and making M&E difficult. Most M&E reports remain unread, making it difficult to provide feedback and enforce grant conditionality. Moreover, for roads, DAK funds are allocated mainly for betterment and rehabilitation and to a much lesser extent for periodic maintenance. The required focus on physical investments has precluded their being used for routine maintenance.

2.4 Donor support for sub-national road improvements

The WB and other donors have helped improve the planning and execution of road improvements and maintenance at national and sub-national levels. WB-funded programs including EIRTP-1 and EIRTP-2 and the AusAID funded EINRIP, the most recent in Eastern Indonesia, have supported periodic maintenance, rehabilitation and betterment, but not routine maintenance directly. EINRIP is restricted to national roads only. For EIRTP-2, a condition attached to loan eligibility was that each LG was to commit to an agreed program of routine maintenance, but there is no evidence that this was carried out effectively and no sanctions have been applied.

In addressing the problem of poor-quality work, a recent WB-supported assessment of Indonesia's road construction industry mapped the drivers of poor performance, relating them to capacity constraints, weak accountability mechanisms, a loss of trust in the system, and some unhelpful factors in the underlying institutional and regulatory setting¹¹. Rather than seeking to improve the capacity of weak contractors by focusing on how they carry out the work (a tendency under previous projects), it suggested focusing on building effective accountability mechanisms and confidence in the fairness of the market so that the best contractors would have a clear incentive to invest in their own capacity.

This approach to incentivising better performance is picked up by another initiative of the WB: the LGDP. This aims to improve the accountability, reporting and overall effectiveness of the DAK system for roads, water, sanitation and irrigation in five pilot provinces (Central Kalimantan, East Java, Jambi, North Maluku, and West Sulawesi). Central to the program is reimbursement of the DAK for

¹¹ World Bank, *Assessment of the Road Construction Industry in Indonesia*, June 2011.

infrastructure on the basis of verified physical outputs delivered by participating LGs. This project is still under implementation, but the LGDP has demonstrated the willingness and capacity of LGs to participate in the program, even with a loan inducement equivalent to only 10% of each LG's DAK allocation. However, LGDP did not cover routine maintenance (the key focus of PRIM to avoid the expensive build-deteriorate-rehabilitate cycle) and some problems were encountered in verifying technical quality of outputs during implementation.

2.5 International trends

International trends in the reform of road management involve two important changes:

- a move away from force account in favour of contracted works – this has the advantages that payment is made only when work is carried out to specification, rates are known, thus making budgeting and planning easier, appropriate levels of risk are transferred from the public to the private sector and, importantly, the profit motive encourages efficiency; and
- a move towards performance-based contracting (PBC) arrangements for maintaining and managing roads.

While the full PBC approach is probably not workable for sub-national roads in Indonesia in the near future¹², a simpler output-based schedule of rates (SOR) system has merit where payment is based on verified quantities, quality and timeliness. Such a system was successful in the AusAID-funded *Key Roads for Growth Maintenance Project* in Papua New Guinea.

2.6 Lessons for PRIM

One of the most important shortcomings with previous interventions has been the neglect of routine maintenance after road improvements were made, even when it was a condition for participating in a project like EIRTP-2.

A common failing is that contractors are paid for mediocre work having taken advantage of the weak accountability of LG and supervising staff. A mid-term review of implementation of EINRIP showed that construction quality is a major problem, even when supervision was carried out by international consultants and AusAID had an active and qualified full-time monitoring unit. However, technical audits proved very effective in addressing quality problems and should become an integral part of future projects in Indonesia, including PRIM. The new approach proposed under PRIM would make the LG more directly accountable by placing it at risk of losing the expected grant component if works were not up to standard following independent verification, even if accepted by the supervisor.

Innovative features of EINRIP which have so far proven to be effective (and should be incorporated as appropriate in future road programs, including PRIM) include: (a) the use of full engineering designs (FED) which incorporate road safety treatments; (b) improved design standards, including a 20-year pavement design life, improved road alignment and drainage; (c) introduction of FIDIC¹³ contracts, using independent consultants as supervising engineers; (d) independent technical and

¹² Initial attempts to introduce this approach for national roads in Indonesia have been poorly prepared and have focused mainly on rehabilitation work. They differ little from an extended warranty.

¹³ *Fédération Internationale des Ingénieurs-Conseils* (International Federation of Consulting Engineers).

financial audit consultants (TFAC); (e) design safety audits for major projects; and (f) a long-term monitoring and evaluation (M&E) program which extends 3-5 years after completion of the project.

Experience with road projects financed by the WB, Asian Development Bank (ADB) and Japan have shown that time delays in completion of projects are a major problem. EINRIP is suffering from this, and the loan closing date has already been extended twice. The reasons include delays in procurement and land acquisition, the inability of some contractors to mobilize on time or to stick to the contract schedule, and the slow internal processes for approval of variation requests¹⁴.

Even with use of procurement advisors, there have been procurement delays under EINRIP due to the inexperience of the Procurement Committees. While the Anti-Corruption Action Plan (ACAP) has resulted in some improvement, it also prohibited pre-bid conferences, which meant that there was no opportunity to clarify with contractors the implications of the FIDIC contracts and the importance given to quality of construction.

Most of these problems are not new; some go back more than 30 years. For example, the WB-financed Second Rural Roads Development Project, which commenced in the 1980s, aimed to reform and strengthen the institutions concerned with district roads and to improve their condition through rehabilitation and maintenance. Its components were not much different from those of projects 30 years later.

PPB procedures have also received attention over the years. Yet, despite substantial investments under earlier donor-funded projects, they remain ineffective. Key lessons have been that PPB tools should be simple and within the capability of the agencies using them, they should be supported until LGs can use them effectively without assistance, and they should form an integral part of the routine annual planning and budgeting cycle.

Institutional issues impact on the effectiveness of road programs in other ways too. An example is the automatic end-of year cancellation of unused budgets. This deadline, intended to promote fiscal discipline, results in a rush to certify works and sacrifices quality; sometimes progress is even falsified. For over 100 national, provincial and *kabupaten* road contracts in EIRTP-2 between 2004 and 2011, including multi-year packages, 44% of all disbursements were made in December and January¹⁵. The situation would have been even worse if contracts had been limited to single-year implementation.

PRIM would include the use of multi-year contracts with sufficient construction periods to allow for idle time during the wet season (October to February), an incentive for early budget approval and an incentive for the province to encourage good work progress.

An additional rule designed to reduce waste is the disqualification of bids which exceed the Owner's Estimate (OE). To ensure that quality is not sacrificed, PRIM includes more systematic and transparent preparation of the OE.

¹⁴ PRIM includes a manpower and training needs study as well as development and implementation of training programs for national consultants and contractors and for procurement committees as well as for provincial staff, especially in road planning, design, implementation, and maintenance.

¹⁵ Draft Borrower's Project Completion Report on EIRTP-2, DGH, October 2011, para 7.2 (iv).

The M&E framework (Annex 8) includes a problem statement matrix setting out the issues of Accountability, Capacity, Trust and institutional Setting, and highlighting the governance changes targeted by PRIM.

2.7 Incentive and accountability for performance

The current state of provincial roads is mainly the result of poor-quality construction and insufficient maintenance, especially routine maintenance. Budgets tend to be allocated for capital projects with higher visibility, while maintenance is neglected. Projects are not always chosen using rational, needs-based criteria. Work is poorly specified and supervised. Public works agencies have limited capacity, with poorly trained staff.

These are all symptoms, however, of a deeper problem: there is no pressure or incentive for LG road agencies to do things any better. They are not held accountable for their performance in managing the network effectively and achieving value-for-money. Nor are they pressured by public interest and scrutiny to set the right priorities, allocate funds more productively, implement work with better quality and produce better outcomes for users. There is no check on whether they deliver value-for-money, nor sanction when – as is usually the case – they fail to do so.

The design of PRIM reflects the lessons learned from the earlier experience summarised above. Unlike efforts before, its focus is on maintenance rather than reconstruction, rehabilitation or capacity expansion, and the conditions attached to its grant contribution are directly aimed at strengthening governance arrangements on a sustainable basis.

Focusing on incentivising better routine maintenance, which is almost completely neglected at present, PRIM would hold provincial road agencies accountable for both physical results and improvements in program governance. It would reward performance by reimbursing a portion of verified maintenance expenditures only if the completed works, and the process by which they were planned, prepared and delivered, met agreed technical and governance indicators. To ensure sustainability it would work through, and in the process strengthen, existing government procedures, using local consultants for design and supervision and local contractors for implementation. It would reward greater involvement by DPU staff in the development of annual maintenance plans and, by the end of the five year implementation period, carrying full responsibility for this with no assistance from consultants. By raising the role, profile and capabilities of the provincial RTTF, it would hold the road agency accountable to civil society and road users for its performance. It would introduce objective PPB procedures, and reward their permanent adoption as part of the annual planning cycle. It would also include strong anti-corruption incentives.

2.8 PRIM's emphasis on provincial roads

PRIM focuses on provincial roads because they offer the best prospect for carrying out a successful pilot, in terms of significance, scale and capabilities. Provincial roads are the intermediate links between national roads and district roads. Although they account for only 10% of the length of the Indonesian road network, they carry 19% of the total vehicle-km of travel.

Provinces generally have greater capacity and better-trained manpower than districts. This is important in the early stages of the pilot program. Limiting the program initially to provincial roads gives a better chance that central government support can be effective. If the program proves

successful, it could be extended to district roads, while the experience gained by provincial governments would allow them to assist in the implementation of an expanded program.

3 THE PROPOSED PRIM PILOT PROGRAM

3.1 Program Objective

The program's main objective is to develop and test in NTB a pilot program using results-based grant disbursements to incentivise lasting improvements in governance and value for money in planning and carrying out the maintenance (and, where necessary, rehabilitation) of provincial roads. This would result in improved road durability, condition, and connectivity which in turn would lead to improved service to communities and users, better access to markets, services and opportunities, lower transport costs and fewer constraints on economic growth. The hope is that the grant incentive model will eventually be adopted by central government to secure better value-for-money and applied to all provinces and even districts.

The planned program is based on the principle that financial incentives in the form of grant contributions to the costs of maintenance, paid on completion of the work to agreed standards, would improve provincial road management and condition on a sustainable basis. This approach addresses the major constraints to effective road maintenance described in the previous chapter, as also illustrated in Annex 8.

3.2 Choice of NTB

IndII's Phase 1 studies in 2010 covered five provincial road agencies and eight district agencies in West Java, Central Java, Bali, NTB and West Sulawesi, selected as being representative of western and eastern Indonesia. The studies in each province investigated the network status with respect to condition and funding, the quality of maintenance planning and the potential for a results-based system for the maintenance of provincial and *kabupaten* roads. Phase 2 of the preparatory studies focused on NTB in 2011, including an in-depth study of work practices in the DPUs of the province and two districts (West and Central Lombok).

The total length of provincial roads in NTB is 1,772 km (Governor Decree 559/2010). This accounts for 3.7% of Indonesia's total provincial network. The breakdown by surface type and condition is shown in Table 3.1. About 49% is in stable (fair to good) condition, but the condition varies greatly depending on type of surface. 90% of the length of asphalt roads (47% of the network) is in stable condition. In contrast, roads with an unbound surface represent 33% of the network but only 8% are in stable condition, and access on some 303 km is at risk of interruption during the wet season (based on 2011 IndII survey).

Table 3.1: Condition of NTB provincial roads, 2011

Surface Type	% of network length	% Stable	% Unstable
Asphalt	47%	90%	10%
Penetration Macadam	20%	19%	81%
Unbound	33%	8%	92%
ALL	100%	49%	51%

According to IIRMS¹⁶ data from DGH, the average surface roughness, measured in terms of International Roughness Index (IRI), has increased from 6.12 in 2004 to 6.61 in 2007 and 8.92 in 2010¹⁷. It is clear that the provincial network in NTB is in need of maintenance and rehabilitation.

Because of this, and the Provincial Government's strong support, NTB was chosen as the pilot province for PRIM. The Governor and Provincial Parliament authorised multi-year funding and multi-year road work contracts even before any commitments had been made by IndII or AusAID. NTB established an RTTF in line with Law 22/2009. It increased its budget for road maintenance in 2012, and strongly urged the IndII/DGH missions to provide further assistance. NTB is also the fifth-poorest province in Indonesia based on percentage of poor population, poverty severity index and the poverty gap index¹⁸.

Bappenas, MoF and DGH all wish to add other provinces with varying degrees of fiscal capacity and technical and management capability and from different regions to test the program under different circumstances. The decision to extend PRIM to a second stage (July 2015-2018) in NTB or to other provinces or districts would be made in first half of 2015 if initial results show that it has been successful and any problems identified during implementation can be satisfactorily addressed. Measuring success would be based largely on a M&E report in early 2015. Early in the preparation of this M&E program design, agreement would need to be reached with Gol on the criteria for selecting additional provinces and/or *kabupatens*.

3.3 Proposed pilot program

The program would consist of two main components:

- **Component 1:** Reimbursement of a proportion of verified expenditures for maintenance of provincial roads (up to \$52 million in grant assistance)

The maintenance works to be carried out under the program have been identified from condition surveys and ranked using HDM4-based evaluation tools. These are described in Annex 3. For the whole program to 2018 they would comprise:

- routine maintenance amounting to about 6,308 km-year (3,402 km-year through improved *swakelola* and 2,906 km-year of contracted works);
- backlog and minor works (spot improvements and holding treatments and major work on shoulders and drains) on about 679 km;
- periodic maintenance for about 303 km; and
- about 167 km of rehabilitation works.

¹⁶ Indonesia Integrated Road Management System. To assist in the monitoring of the network, and improve the province's capabilities in data management, PRIM would facilitate efforts by DGH to encourage NTB to use a database management system for its road network, conditions and programs, as envisaged under MPW Ministerial Regulation 18 of 2011.

¹⁷ The higher the roughness the worse the road condition.

¹⁸ Source: Statistics Indonesia (Badan Pusat Statistik), September 2012. NTB ranks behind Papua, Papua Barat, Maluku and NTT.

Measures to improve road safety (road signs, and elimination of accident black-spot risks) would be included.

The definitions of the works categories are as follows:

- Routine maintenance involves cleaning drainage systems, cleaning and minor repairs to structures and road furniture, vegetation control, shoulder maintenance, and surface repairs (mostly crack sealing and patching of potholes). Currently this type of work is done by *swakelola* but it would be done increasingly by contract under PRIM.
- Backlog and minor works (BMW) help eliminate the backlog of relatively minor works identified by the condition survey as necessary to bring the road to a stable, maintainable condition. Almost 80% (by value) of this would deal with defective road shoulders and ineffective drainage systems, or the absence of appropriate drainage features. Road surface defects, including areas requiring pre-emptive patching to reduce the likelihood of road failure, make up the balance of the BMW costs. The BMW category was created for PRIM because of their importance to the NTB program. BMW would come under the category of rehabilitation under the MPW Decree.
- Periodic maintenance involves overlays, shoulder make-up, pavement markings and installation of traffic signs.
- Rehabilitation consists of pavement reconstruction, major overlays, pavement reinstatement, shoulder make-up, pavement markings and installation of traffic signs.

These are consistent with the definitions in MPW Decree 13/PRT/M/2011 on *Maintenance and Inspection of Roads*.

The above works are for the full period 2013-2018, but the current funding authorization for IndII and AIG expires on 30 June 2015 and there is no guarantee of funding thereafter. Consequently, the program is divided into two stages: Stage 1 (for which there is guaranteed funding) would cover the period from 2013 to 30 June 2015; Stage 2 (for which funding is not guaranteed) would cover the period from 1 July 2015 to 30 June 2018. The Stage 1 program would amount to about 2,324 km-year of routine maintenance (1,550 km-year by improved *swakelola* and 774 km-year by contract), 679 km of BMW contracts, 26 km of periodic maintenance and 18 km of rehabilitation (Table 3.2: Maintenance modality and output by Stage

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Table 3.2: Maintenance modality and output by Stage

(km)				
Maintenance type	Modality	Stage 1	Stage 2	Both Stages
Routine maintenance (RM)	Contract	387	TBD ¹	TBD
	Swakelola	942	TBD ¹	TBD
	Total RM	1,329	1,329	1,329
Backlog & Minor Works (BMW)	Contract	679	0 ²	679
Periodic maintenance	Contract	26	277	303
Pavement rehabilitation	Contract	18	149	167

Maintenance type	Modality	Stage 1	Stage 2	Both Stages
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¹ The split of routine maintenance in Stage 2 between *swakelola* and contract would be guided by evaluation of performance of these modalities in stage 1.

² The totality of BMW would be implemented in Stage 1 (2014).

- **Component 2:** Institutional development incentive (up to \$2.5 million in grant assistance)

This component would involve a grant incentive of up to \$2.5 million (about 5% of the grant for works) to reward institutional performance. It would reward NTB for implementing the training to be provided under PRIM, preparing and prioritising annual work programs with declining input from the program implementation unit consultant (PIUC), strengthening transparency and public consultation through the provincial RTTF, and monitoring implementation of PRIM and taking early corrective actions. The last of these would be based on feedback from the M&E program. Of the \$2.5 million allocated for 2013-2018, \$1.0 million is expected in Stage 1.

In addition to these two components, IndII would provide \$15.3 million of TA in institutional strengthening, program management support, M&E and verification of outputs. This would involve:

- training provincial road agency (DPU), planning (Bappeda), and environmental agency (Bapedalda) staff to improve their capacity to plan, program, budget, design and implement maintenance works; improving and providing mentoring to the *swakelola* system; strengthening procurement committees; and upgrading the skills of contractors and consultants in NTB;
- assisting civil society through support for the RTTF, making it effective in ensuring that money is well spent, putting pressure to improve the quality of construction and maintenance services, and increasing transparency, including clarity over the prioritisation of works;
- providing technical support to (i) DGH's TT, through the program management consultants (PMC) who would assist in overseeing PRIM and verifying the completed works as well as conducting TFAs during implementation, and (ii) NTB's PIU, through a consultant (the PIUC) who would help manage the program at the provincial level, including maintenance planning, follow-up implementation of works, and coordination of reporting to the TT. The PIUC would also be responsible for training and mentoring provincial government staff, the RTTF, and design/supervision consultants and contractors;
- M&E of the pilot program during implementation and for three years afterwards. An M&E report on Stage 1, to be prepared early in 2015, would help review the case for further funding after the current authorisation for IndII and AIG expires in June 2015.

About \$15.3 million of TA would be provided to PRIM through IndII over the two stages, of which \$5.8 million is expected to be in Stage 1 (see Section 3.5.2).

3.4 Key program features

3.4.1 Changing behaviour

The results-based, grant-incentivised approach is the key innovation of the PRIM design. No comparable programs have adopted this approach before. A key element for its success is changing

behaviour on a sustainable basis by ensuring greater transparency about plans and performance and more effective external oversight. The RTTF would play a very important role in this. PRIM provides financial incentives to induce institutional change and training and support to the RTTF to make its influence more effective. It also engages an independent third party to verify that completed works meet agreed criteria, and incorporates incentives to reduce the chances of fraud and corruption.

3.4.2 Emphasis on routine maintenance

Routine maintenance tends to be neglected, even for projects financed by donors in which local governments make commitments as a condition of loan participation. Routine maintenance and minor works, and the removal of the huge backlog as well as spot improvements, are the principal focus of the works proposed to be included under PRIM – together with incentives to ensure that this focus remains sustainable.

3.4.3 Use of existing institutions

To simplify acceptance, ease implementation and improve prospects for sustainability, PRIM uses existing institutions and applies existing systems as much as possible rather than introducing alternative institutional arrangements and procedures. NTB's DPU is the main implementing agency of the program at the provincial level; the PIU, under the Bappeda, would exist only to ensure coordination among the concerned provincial agencies and smoother implementation. Except for design of works in Stage 1, engineering designs and bid documents for road works would be carried out by national consultants¹⁹. Supervision of works in both stages would be done by national consultants, mentored by the PIUC. Implementation of works would be by national contractors, also mentored by the PIUC. These consultants and contractors would be selected through national procurement procedures and not subject to "no objection" from IndII.

3.4.4 Additionality

Additionality is a further goal of PRIM. The grant contributions (up to 40% of cost of works and about 5% for improved institutional performance or a total of up to \$54.5 million) should result in additional funds being used for road maintenance and improvement of the provincial road network and increasing the capacity of concerned agencies. It is important, though, that PRIM does not trigger counteracting reductions in spending on road maintenance from the provincial budget (APBD).

3.5 The PRIM pilot program

3.5.1 Works to be carried out

Of the gazetted 1,772 km of provincial roads in NTB about 219 km have been reclassified as national roads; their improvement and maintenance will be carried out under the national budget (ABPN). An additional 184 km are to be improved and maintained by the mining companies which benefit from them. The remaining length to be maintained is 1,369 km.

¹⁹ In fact the DPU has already commissioned designs for high-priority works identified during PRIM's preparation. These are being reviewed by IndII and, if found acceptable, may facilitate an early start on contract tendering.

Estimated works under the PRIM program are based on: (a) maintenance programs prepared by IndII in 2011, optimised on the basis of whole-of-life costing, (b) a 5-year maintenance program prepared by DPU for potential co-funding by GoI and IndII, (c) the program of maintenance committed for funding by the provincial government²⁰, and (d) condition surveys by IndII consultants in September/October 2012 on 423 km of DPU priority roads. The condition surveys complied with the procedures set out in the DGH *Road Maintenance Manual* prepared with IndII assistance. The survey revealed a considerable backlog of routine maintenance and a need for additional drainage infrastructure to protect pavement and surface treatments.

The maintenance program was prepared for the period 2013-2018. It consists of a firm program for Stage 1 (June 2013 to June 2015) and an indicative program for Stage 2 (July 2015 to June 2018). It covers four types of work: routine maintenance, BMW, periodic maintenance and rehabilitation; these were defined earlier. Routine maintenance by *swakelola* has not been fully effective, due to low funding allocations and the diversion of maintenance funds to capital works. PRIM would improve the *swakelola* system through on-the-job training and mentoring by PIUC advisors. Routine maintenance by contract would also be implemented under PRIM.

Under PRIM, about 274 km (137 km-year) of maintenance would be carried out by *swakelola* in 2013. The work would not start until late in third quarter of 2013 to give time to introduce the improved *swakelola* system. Table 3.3 shows the expected schedule for routine maintenance by modality (improved *swakelola* or contract) by semester/stage. Note that the distribution of routine maintenance by modality would be revised at end of Stage 1 based on results achieved by then.

Table 3.3: Routine maintenance by period and modality

(km-year)				
Year	Semester	Contract	Swakelola	Total
2013	2	193.5	137.0	330.5
2014	1+2	387.0	942.0	1,329.0
2015	1	193.5	471.0	664.5
Sub-total Stage 1		774.0	1,550.0	2,324.0
2015	2	266.5	398.0	664.5
2016	1+2	764.0	564.0	1,328.0
2017	1+2	801.0	527.0	1,328.0
2018	1	300.5	363.5	664.0
Sub-total Stage 2		2,132.0	1,852.5	3,984.5

Because of provincial budget limitations, none of the BMW would be carried out in 2013. All backlog and minor works covering 679 km would be undertaken in seven contracts to be awarded in 2014²¹.

²⁰ This includes the “acceleration program” arising from recent additional budget allocations.

²¹ If designs currently being produced by local consultants are adequate, a start could be made in 2013.

Once the backlog has been removed, routine maintenance would be performed using a combination of improved *swakelola* and contracts. For efficiency, maintenance during Stage 1 would be delivered through seven contract packages for major works (periodic maintenance and rehabilitation) and 7 packages for BMW. The contracts for major works would be for the period ending 30 June 2015 (about 1.5 years) and would include routine maintenance on all links in each package. Supervision of these contracts would be by national consultants to be procured under national procurement guidelines. Annex 3 presents the works program with more details shown for Stage 1. Further details about the program, its cost, economic justification and implementation arrangements and schedules can be found in the Technical Report prepared by the Interim Support Consultants in November 2012 and finalized in January 2013.

3.5.2 Estimated costs

The cost of PRIM's physical works has been estimated based on bills of quantities and unit costs from contract rates for recent projects under the 2011-2013 NTB "acceleration funding program". These unit costs were checked against EINRIP rates. Routine maintenance and BMW quantities were based on the September-October 2012 condition survey and 2011 field work under IndII Activity T176. The quantities of major treatments (periodic maintenance and rehabilitation) were based on HDM-4 output, observation, and photographs of existing conditions and recent treatments.

The PIUC would prepare the detailed engineering designs and bid documents for periodic maintenance and rehabilitation sub-projects as well as some of the BMW contracts under Stage 1. These designs would update the present cost estimates. Measures to improve road safety would be included in the designs, including provision of road signs and pavement markings, guard rails on high embankments and steep slopes, and measures to address accident black-spots. FED and FIDIC conditions of contract with an independent engineer (national supervision consultant) would be adopted for the pilot program. National consultants would prepare the engineering designs and bid documents for works in Stage 2, with the PIUC reviewing these before releasing them to contractors.

The lengths of the various types of works by stage were presented earlier in Table 3.2: Maintenance modality and output by Stage

on page 24. Table 3.4 below summarises the cost of works by maintenance modality and stage. These costs include physical and price contingencies as well as value added tax (VAT). This table reflects the fact that simple contract and *swakelola* routine maintenance can be initiated early, but other works would require more careful preparation which is reflected in the likely timing and distribution of costs.

Table 3.4: Cost of works by maintenance modality and Stage

(million A\$)

Modality	Stage 1	Stage 2	Total
Routine, Periodic and Rehabilitation Contracts 2013-2015	12.0	-	12.0
Routine, Periodic and Rehabilitation Contracts 2015-2018	-	69.8	69.8
Backlog and Minor Works Contracts	4.9	-	4.9
Swakelola	3.8	3.8	7.7
Sub-totals (end 2012 prices)	20.8	73.6	94.4

Physical Contingency	1.0	3.7	4.7
Price Contingency	1.8	17.1	18.9
Value Added Tax	2.4	9.4	11.8
Totals	26.0	103.8	129.8

The cost of component 2 (institutional incentive) is estimated at about 5% of the AIG grant of \$52 million, or about \$2.5 million.

The cost of the supporting TA services amounts to A\$15.3 million over the two stages (\$5.8 million in Stage 1), including contingencies and taxes. Table 3.5 shows the costs of these services by type of service and stage. This estimate is based on assessed inputs, person-month rates for international and national consultants, and estimated costs for international and domestic travel, office rentals, hotels, per diems, etc.

Table 3.5: Cost of technical assistance by type of consulting service and Stage

(million A\$)

Consulting Service	Stage 1	Stage 2	Total
1. PIUC – Support to DPU/PIU/RTTF			
a. Design and Bid Documents Stage 1	1.4	0.0	1.4
b. Training and manpower development	0.7	0.7	1.4
c. Support to PIU	0.2	2.3	2.5
d. Support to RTTF	0.2	0.3	0.5
Subtotal	2.5	3.3	5.8
2. PMC - Support to DGH/TT and Verification	1.9	3.1	5.0
3. M&E Consultant	0.6	0.6	1.2
Total (end-2012 prices)	5.0	7.0	12.0
Price Escalation	0.3	1.6	1.9
Value Added Tax	0.5	0.9	1.4
Grand Total	5.8	9.5	15.3

The cost of TA (both stages) amounts to about 10% of the total cost of the NTB program. 38% of this (or about 18% of the overall cost of Stage 1) is expected to be spent in Stage 1, in less than two years of the five-year NTB implementation period. Most of this is focused on strengthening local governance and introducing better planning, procurement, contract management and delivery systems and procedures. In later stages of the NTB pilot, local agencies will take most of the responsibility for applying these. The investment in TA, not unreasonable for the NTB pilot, will pay dividends when the same systems and procedures are rolled out across the country once the NTB pilot has proved successful.

Table 3.6~~Error! Reference source not found.~~ summarises the total estimated cost of PRIM. The total is about A\$147.6 million, of which Stage 1 accounts for \$32.8 million. These include a quantity

contingency of 5% and price escalation at 5% p.a. They do not include the cost of local consultant services for engineering designs for Stage 2, nor the cost of supervision during 2013-2018. It was agreed that these would be borne by NTB. The PIUC would provide designs and bid documents for works under Stage 1²². The estimated costs also do not include the cost of works or consulting services should PRIM be extended to other provinces in the second stage.

Table 3.6: Summary of cost of PRIM by stage

(million A\$)

Component	Stage 1 2013-mid-2015		Stage 2 mid-2015-2018		Total 2013-2018	
	Total	PRIM	Total	PRIM	Total	PRIM
Component 1: Works	20.8	8.3	73.6	29.4	94.4	37.7
Component 2: Institutional Incentive	1.0	1.0	1.5	1.5	2.5	2.5
Component 3: Technical Assistance	5.0	5.0	7.0	7.0	12.0	12.0
Subtotal (end 2012 prices)	26.8	14.3	82.1	37.9.0	108.9.0	52.2
Physical contingency	1.0	0.4	3.7	1.5	4.7	1.9
Price contingency	2.1	1.0	18.7	8.4	20.8	9.4
VAT	2.9	1.5	10.3	4.7	13.2	6.2
Total	32.8	17.2	114.8	52.5	147.6	69.7

3.6 Economic evaluation

An initial economic evaluation was carried out in 2011 using 2011 condition and traffic data. It involved a strategic comparison of economically-optimum intervention standards with alternative standards based on DPU practices. Various budget constraints were applied and an unconstrained analysis was also performed. The budget constraints included varying the capital budget from \$15m per year for a five-year period to \$5m per year. This helped inform the level of funding for the proposed PRIM. The results were also used to identify candidate links.

This analysis was revised using 2012 condition data, off-carriageway maintenance quantities based on the 2012 condition survey, and taking account of recently completed and current committed maintenance works.

The economic evaluation was carried out for stages 1 and 2 separately and for the two combined. The analysis for stage 1 was undertaken for each sub-project. The Stage 1 packages were selected following a network-wide analysis performed under budget constraint, with treatments identified as being economically justified in the next few years. They were also identified by NTB DPU as priority road links. In each case the analysis was based on a comparison of “with” and “without” PRIM.

²² Except for designs assessed as adequate that are being produced by local consultants to NTB.

The with-PRIM case represents the proposed PRIM program under which works are executed in Stages 1 or 2 based on the application of economically-optimum intervention standards. The without-PRIM case represents DPU's current practice under which routine works are carried out to a lower standard, typically in response to potholes and failed areas, and with a limit on the volume of work undertaken. Major treatments are the main source of improved road conditions with few preventative treatments applied, except on the most highly-trafficked roads. Quality standards remain current practice, and corresponding deterioration rates are relatively high. The initial investment cost for this "without" option is approximately 60% of the PRIM works (total cost less potential grant of up to 40% of the cost).

The economic evaluation compared benefits and costs. User benefits consisted of savings in VOCs and reductions in user travel time. These were a function of the traffic volume and composition, road geometry and the roughness of the road surface. These were determined using standard HDM-4 relationships. They were applied to a representative four-vehicle fleet to estimate physical resource consumption and travel time, then converted to economic costs using typical unit values for NTB. The characteristics of the vehicle fleet were based on updated figures from EINRIP and IndII studies. Traffic growth rates were conservatively assumed to be 5% p.a. up to end-2019, and 3% p.a. thereafter. Costs were estimated on the basis of the required treatments taking account of a field review of the Stage 1 links. Both costs and benefits were expressed in end-2012 Australian dollars. The NPV and EIRR were calculated using HDM-4, with the model calibrated for local conditions and considering possible improvements under PRIM.

The estimated EIRR for the seven packages of major works (periodic maintenance and rehabilitation) in Stage 1, which lend themselves to life-cycle economic analysis, is 88% and NPV is \$12.5 million, with all links and packages delivering positive NPVs. The EIRR for Stage 2, and those links which are subject only to routine and minor works contracts and *swakelola* in Stage 1, is estimated at 99%. For the full PRIM the EIRR is 98%, and the NPV \$43.5 million. The PRIM case also delivers net road agency cost savings of approximately \$25.3 million as a result of using more efficient maintenance strategy (see Annex 4).

Sensitivity tests were performed to determine the impact of reasonable changes in key parameters. The main variations tested were: capital costs +15%, benefits -20%, and capital costs +15% and benefits -20%. Table 3.7 presents the results. At a program level, PRIM remains economically viable even with significant changes in these parameters. In the extreme case (capital costs increased by 15% and benefits reduced by 20%), the overall EIRR is around 43% with significant net agency costs savings and a substantial positive NPV. However, two contract links proposed for PRIM Stage 1 are marginal under this extreme sensitivity case. Nevertheless it is judged that the total PRIM is robust and would produce high economic returns. Annex 4 presents viability indicators for each link included in the seven packages of major works.

Table 3.7: Sensitivity of EIRR and NPV (in brackets) to changes in assumptions

Stage	Project case	Capital Cost +15%	Benefits- 20%	Cost +15% & Benefits -20%
Stage 1	88%	36%	79%	33%
	(\$12.5m)	(\$8.9m)	(\$11.3m)	(\$7.7M)
Stage 2	99%	51%	95%	48%
	(\$31.0m)	(\$20.9m)	(\$28.5m)	(\$18.5m)
Total	98%	46%	93%	43%
	(\$43.5m)	(\$29.8m)	(\$39.8m)	(\$26.2m)

The two marginal links were investigated further by determining the rate of traffic growth in the first 7 years of the analysis which would deliver a positive NPV for the most extreme sensitivity scenario. The resulting growth rates for Link 42089 (Sp Pengantap - Mt Ajan - Kuta) and Link 421243 (Karumbu - Sape) are 6.8% and 14 % respectively. The break-even growth rate for Link 42089 is probably reasonable and not ambitious, recognising also that the PRIM traffic scenario is conservative relative to regional GDP and has no account taken of generated traffic. The break-even rate for Link 421243 is less realistic, though it is not unheard-of for roads where poor conditions impede vehicle access. Even so, each link should be examined closely at the design stage with an aim to seek cost savings. The design task should also be informed by updated traffic data.

The economic evaluation represents the final outcome of a comprehensive program preparation and evaluation process. These would be repeated each year, and sub-projects to be included in Stage 2 would be selected based on the estimated economic returns and discussions with DPU.

3.7 Performance incentives and indicators

3.7.1 Disbursement-based verification

PRIM adopts a results-based disbursement approach described below, supported by capacity-building and TA. Additional details can be found in Annex 7. Its grant contributions would depend on the achievement of verified outputs. PRIM would also provide a financial incentive to encourage adoption of improved PPB procedures and better governance, transparency and accountability through the RTTF.

3.7.2 Key results indicators

Three key indicators, described in more detail in Annex 2, have been chosen to measure success in achieving the overall program development objective:

- **Institutional improvements.** This indicator focuses on implementing annual maintenance and rehabilitation programs in accordance with agreed PPB procedures and schedules with diminishing assistance from the PIUC. DPU staff would be given training and assistance by PIUC in developing and applying agreed PPB procedures. This assistance would be phased out over time, after which provincial staff should be able to develop the annual programs without any assistance. The RTTF would scrutinise the annual programs representing the public's interest in securing value-for-money.

- **Improved contracting.** This includes a subset of three indicators to help ensure better-quality contractors and design/supervision engineers. They include: (a) the percentage of completed PRIM maintenance and rehabilitation contracts which do not meet agreed standards (expected to decrease over time); (b) the percentage of bidding contractors whose work fails to meet the PRIM verification requirements (also expected to decrease over time); and (c) the percentage of consultants bidding on PRIM-supported design and supervision activities which do not meet qualification requirements specified in the request for proposals (again, expected to decrease over time).
- **Improved physical works.** This indicator includes a subset of four indicators to demonstrate relevance, quality and extent of maintenance interventions. They include: (a) km of provincial roads under maintenance and rehabilitation (this proxy measures implementation of the agreed annual works programs as well as the realism of the programs and implementation capacity); (b) km of provincial roads which are impassable during wet season (this would reduce over time); (c) link-km with seasonal passability constraints (this would reduce over time); and (d) the average IRI of the provincial road network (also expected to decrease over time).

3.7.3 Disbursement-linked indicators

Disbursement-Linked Indicators (DLIs) are a subset of the results indicators in the Program Framework and include the following (see Annexes 2 and 7):

- **Program verification (DLI-1)** involves confirming that (a) the annual road works program is based on the agreed PPB procedures (DLI1-1); (b) the works under the annual works program are entered into the provincial budget (DLI1-2); and (c) the annual works program, including the location of the works, is uploaded on a website (DLI1-3). Further, to meet Gol's requirement that disbursements are made against physical outputs, the following additional requirements should be met for Stage 1: the agreed training program is on schedule (this program will be developed by PIUC and will be based in part on a needs assessment study); on-granting agreement between MoF and NTB (SPPH) has been signed; contracts for major works (periodic maintenance and rehabilitation) have been signed and advance payments have been paid; and routine maintenance by *swakelola* are being planned and implemented over at least 3 months. Should all the above requirements be satisfactorily met and verified, the province would be eligible for a reimbursement of up to 5% of the AIIG grant or 2% of the cost of the works in the approved works program for Stage 1 ($5\% \times 40\% = 2\%$).
- **Verification of physical works (DLI-2):** To be eligible for reimbursement from the AIIG grant, the physical outputs for maintenance and rehabilitation works (routine maintenance by *swakelola*) (DLI2-1), routine maintenance by contract (DLI2-2), BMW (DLI2-3), periodic maintenance (DLI2-4) and rehabilitation (DLI2-5) must be verified in terms of physical completion, compliance with technical specifications, compliance with national procurement guidelines and compliance with environmental and social safeguards. Any sub-project which meets the eligibility criteria, including compliance with technical specifications, would be eligible for reimbursement of the designated percentage from the grant. In NTB, this is set at 38% of the value of eligible works ($95\% \times 40\% = 38\%$).

- **Verification of institutional performance (DLI-3)** would be based on determining that: (a) the agreed training program has been successfully implemented (DLI3-1); (b) the annual works program is prepared increasingly by DPU with declining input and guidance from PIUC (DLI3-2); (c) the RTTF has established SOPs to involve the public and handle their complaints (DLI3-3); and (d) the RTTF holds public forums and disseminates the results to the public (DLI3-4). Again, to meet Gol's requirements for disbursement, the following should also be met: routine maintenance budget should be included in the provincial budget (APBD) and the programmed routine maintenance for the whole provincial network (including those under PRIM) has been implemented.

3.8 Output verification and grant disbursement

3.8.1 Entity in charge of verification

Verification of outputs would be carried out independently by DGH through its TT, supported by the PMC. The PMC tasks include verification of the annual works program; verification of completed works; TFAs of works during implementation; and verification of institutional performance. The PMC would be engaged by IndII.

3.8.2 Scope of verification

As noted above, verification would cover three aspects: verification of program preparation, physical outputs and institutional performance. Annex 5 gives details of the verification criteria and procedures for the three verification categories. In the case of physical works, verification would not wait until all the links in a given contract package have been completed. Sections that have been completed can be verified. This would essentially result in interim payment to NTB, easing its cash-flow burden.

Verification does not replace quality control by the contractors or quality assurance which should be carried out by Supervision Consultants and DPU managers assisted by the PIUC.

The request for verification will be initiated by the PIU to the TT in DGH. The TT assisted by the PMC will carry out the verification within 14 business days of receipt of the request and will communicate the results to the PIU within 14 business days after TT/PMC have completed the verification and the PIU has complied with all requirements for reasonable inputs by the TT/PMC.

Verification would cover works that have been completed, i.e. up to the stage of Preliminary Hand Over (PHO) or opening to public use. Initially, all works under contract would be verified. But later as the volume of work to be verified increases, verification would be carried out on a sample basis. Routine maintenance verification visits would be scheduled on a sample basis.

3.8.3 Technical and financial assessment

Technical and financial assessments (TFAs) are also to be carried out by the DGH TT, assisted by the Verification Team of the PMC²³. The intention of the TFAs is to reduce the probability that works will

²³ MoF has stressed that verification should not be confused with audit, since under Law 15/2006 Badan Pemeriksa Keuangan (BPK) is the only state agency authorised to carry out audits of government activity, including the activities of provincial governments.

not be approved during verification and to investigate the technical quality of works and make recommendations to the DPU (and its contractors and supervision consultants) on corrective actions that should be taken to improve quality and/or timeliness.

3.8.4 Key issues in verification

1. **Are DLIs separate or linked?** There is no easy answer to this. It depends on the relative importance of the indicator and severity of non-compliance. However, GoI insisted that all indicators must be met to affect each of the four disbursements under Stage 1 (see Table A5.1 in Annex 5).
2. **What would happen to an advance payment if verification determines that the associated works are unsatisfactory?** Based on discussions with GoI, the advance payment for Stage 1 is replaced with one disbursement for program preparation. *Once the TT, supported by the PMC, verifies program preparation (first bullet point under Section 3.7) the related disbursement (5% of AllG grant) from MoF to NTB must be made. If later there are findings from an auditor (BPK) which indicates some ineligible expenditure, the concerned grant funds must be transferred back to MoF. According to the Grant Funding Agreement between MoF and AusAID, the concerned funds would be deducted from the following disbursement from AusAID to MoF.*
3. **What would be AusAID's stance if the DGH TT over-rode the assessment of the independent PMC?** After discussions with DGH/TT, AusAID would decide whether or not to conduct its own investigation of the case (using its own staff and/or independent consultant) to establish the facts and assign responsibilities. AusAID would then discuss the findings with DGH/TT and if necessary with the Steering Committee. It should be noted that DGH does not have much experience in verification whereas PMC should have the required expertise and specialised staff. If corruption and fraud is suspected then AusAID could retain auditors for a thorough investigation and GoI and NTB would provide AusAID and its consultants required access to agencies, individuals and records. Corrective action by AusAID would depend on the results. In case of fraud or corruption, the provisions of the grant agreement would be applied in addition to non-verification of the concerned works.
4. **Would verifiers rely on logs and reports or would they interview a sample of *swakelola* and consultant personnel to check if payments have been made?** Verifiers would rely mostly on logs and reports, but would also interview a sample of concerned personnel and conduct spot checks in the field (including during TFAs).
5. **Would the verifiers check bid documents for a sample of bids to check for signs of collusive practices?** Yes, this would be done.
6. **Environmental screening:** The annual works program report (prepared by NTB PIU/PIUC) should include environmental and social screening of all sub-projects and identify sub-projects which would require UKL/UPL or land acquisition or indigenous peoples development plans. Because PRIM involves mostly small maintenance works, few sub-projects would fall under this category. Further, PRIM would exclude sub-projects with environmental category "A".

7. **How is partial compliance to be handled when determining grant amounts?** The grant amounts for program verification and institutional incentives would be determined on how well each DLI is satisfied. In the case of physical works (which account for the majority of the grant amounts) verification of physical completion, procurement, and environmental and social safeguards would involve a yes/no decision. But a reduced reimbursement would be made for sub-projects which do not fully satisfy the technical specifications, in case the contractor does not rectify the deficiencies identified during verification. This would be determined based on the estimated reduction in design life of the sub-project. During the second stage, the value of works which do not meet specifications would be considered zero.

Further details regarding this last issue are contained in Annex 5. Details regarding verification and the above issues are presented in the project management manual (PMM).

3.8.5 Calculation of output values

Output values are calculated for the program of works, implementation of physical works, and institutional performance:

- The Program Tranche would recognise and give an incentive for good program preparation and ease the pre-financing burden on the province. 5% of the grant funding share (Program Tranche) would be paid on Program Verification as defined in Annex 5. This amounts to 5% x 40%, or 2%, of the program cost. The remaining 95% of the grant share (or 38% of program cost) would be disbursed as an Implementation Tranche.
- For the Implementation Tranche, output values for completed physical works are the product of the length of each specific type of work and the reference unit cost (RUC) for that kind of work, with adjustments made for non-standard pavement widths.
- The Institutional Incentive amounts to \$1.0 million for stage 1, released in two tranches as discussed in Annex 5.

3.8.6 Reference Unit Costs

RUCs are the cost of goods, materials, labor and management required to produce units of outputs, acceptable to GoI, NTB, and IndII. These are to be notified by DGH to IndII and the TT by 15 February of each fiscal year of program implementation and included in the PMM. RUCs are central to the concept of PRIM's Program for Results, whereby the emphasis is on the program and not on the individual transactions. Disbursement is made on basis of RUCs and not the priced bill of quantities (BOQ) of each contract. Costs based on RUCs might exceed or be less than the actual costs, but overall they are a reasonable approximation of costs (see Annex 6).

RUCs differ from NTB's General Standard Prices (SBU, *Standar Biaya Umum* NTB) because the latter are based on historical contract rates which may not be sufficient to pay for good-quality work due to past lack of accountability.

The current estimated RUCs are based on an analysis of the 420 km of road which would form part of PRIM Stage 1. These are on average 4.5m wide. The specific RUCs relate to this sample. They are for stable conditions, i.e. good to fair. Because they were assessed using a BOQ approach they are

reasonably accurate, on the assumption that the contract rates used were drawn from more than 10 recent contracts in NTB and are consistent with EINRIP unit rates. RUCs approximate contract values at a program level.

For routine maintenance, estimated RUCs are slightly below the SBU rates, but the latter are for maximum APBD budgets and are not owner's estimates (OEs). The SBUs also use upper limits to quantities, which is not the same as actual quantities. For BMW the RUCs have a wide range because they span the conditions from very good to very poor.

RUCs were determined for the year 2013 on a per-km basis based on calculated BOQ items. They have been compiled for each link in the PRIM Stage 1 program for annual routine maintenance by contract and by improved *swakelola*, BMW by contract and improved *swakelola*, periodic maintenance, and rehabilitation. These are shown in Annex 6, where the basis for their determination is also described.

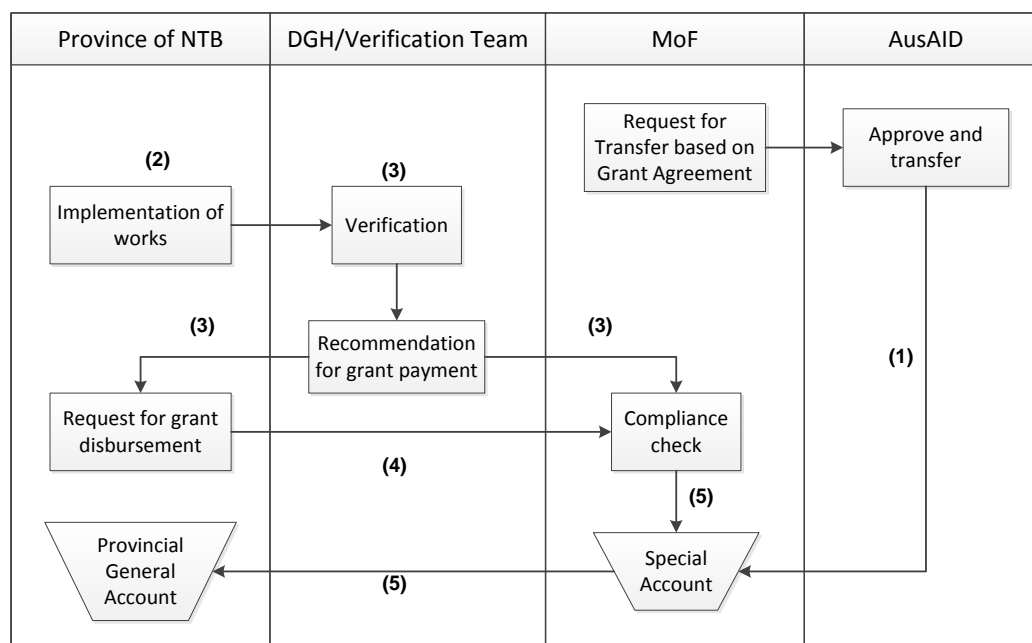
The RUCs were developed by IndII Interim Consultants in cooperation with NTB DPU during September and November 2012. RUCs for 2013 (shown in Annex 6) were discussed with and reviewed by DGH to ensure that they are based on its technical standards and reflect market prices in NTB, including from recently completed and ongoing similar contracts such as EINRIP. RUCs for 2014 and later would be updated by NTB with assistance from the PIUC. RUCs for each year would be submitted to DGH for evaluation and approval. The RUCs to be used in valuation of verified works have to be agreed by DGH, NTB and IndII. The RUCs would be formally issued by DGH to the verification team (TT/PMC) by 15 February of each fiscal year.

3.9 Disbursement mechanism

For each disbursement, the Verifier (DGH/TT/PMC) would prepare a Technical Verification Report (TVR) for submission to MoF, copied to AusAID/IndII, including details of the above calculations as well as copies of all documents used as evidence.

A Direct Funding Agreement (DFA) would be signed by GoI (MoF) and AusAID, and an On-Granting Agreement (NPPH) would be signed by GoI (MoF) and the Province of NTB after MoF issues approval of the Grant to the Province (SPPH). GoI (MoF) would then establish a Special Account (RK) in Bank Indonesia (BI), to which the grant funds would be transferred. The procedure is outlined in below.

Figure 3.1: Simplified flow of disbursements under PRIM



Grant funds would be transferred to the GoI RK in accordance with the number of tranches stipulated in the DFA. The NTB Government would budget for and implement the works. The TT would evaluate the works using the PMM and DGH would issue a recommendation for the amount of the grant payment due. NTB Government would then submit a request to MoF for a grant disbursement. MoF would check the request for compliance with the NPPH and would then transfer funds from the RK to the Province's General Account (RKUD).

As agreed with MoF, for the first stage (ending in June 30, 2015) four disbursements will be made against approved TVRs. The first verification covers program disbursements (maximum of 5% of AIIG grant); the second covers up to 20% of AIIG grant and 50% of the incentive for improved institutional performance and requires that cumulative progress of verified physical works is at least 25%; the third covers up to 40% of AIIG grant and requires that cumulative progress of verified physical works is 65%; and the fourth covers up to 35% of AIIG grant and the remaining 50% of incentive for improved institutional performance and requires that cumulative progress of verified physical works is 100%. Table A5.1 summarises these disbursements and related requirements. Similar conditions will be developed for disbursements under Stage 2 (July 2015-2018) once GoI and AusAID agree to extend PRIM to cover Stage 2 and AIIG grants for that period become available. More details regarding verification and disbursement are available in the PMM.

4 IMPLEMENTATION ARRANGEMENTS

4.1 Program management

The PRIM program would be implemented to the maximum extent possible through GoI institutions and systems. Its interventions are at the level of detailed procedures, and do not require changes in regulations. Government approval of grant documents and working teams in DGH and the Province can be made under existing regulations.

The Implementing Agency (IA) would be the provincial government, through the Bappeda. A PIU to focus attention on the program and coordinate the inputs of participating agencies was established on 1 October 2012 by decree of the NTB Governor No. 645/2012. MoF requires a PIU for grants such as PRIM to ensure good coordination between central government, local government, and donor.

The PIU would be supported by a consultant (PIUC), engaged by IndII, who would also assist in the institutional strengthening and training component (Components 2 and 3). PIU/PIUC would carry the detailed engineering designs and bid documents for sub-projects included in Stage 1; help the DPU in procuring services of engineering consultants to design the works for Stage 2 and supervise the construction of works, and the contractors to implement the works; and arrange for its own staff to mentor and help manage the *swakelola* works. The PIU/PIUC would play an active role also in ensuring an effective RTTF. The responsibilities of the PIUC can be reduced over time, and more of its tasks transferred to DPU depending on the performance of local agencies. For example, the development of the annual work programs would initially require substantial support from PIUC, but later the DPU should be able to prepare the program by itself without assistance from the PIUC. Whereas the engineering designs for Stage 1 would largely be prepared by PIUC, national consultants would do the same for Stage 2, and PIUC would review the designs and bid documents prior to their release to contractors for bidding. The PIUC would carry out quality assurance during implementation (in addition to work by supervision engineers), but its involvement would be reduced over time.

The Executing Agency (EA) for the PRIM program would be DGH. A Technical Team (TT) has already been established by decree of the Director General, who would also issue the PMM and keep it up to date. The TT would oversee implementation of PRIM in NTB (and future provinces if the program is extended in the future) and undertake verification of outputs. Members of the TT would include staff of the Directorates of Planning, Technical Affairs and Implementation Region 2 (designated as the lead executing agency), and the Inspector General in MPW. The TT would be supported by a Program Management Consultant (PMC), engaged by IndII, who would help oversee the program and conduct verification of outputs. Support to TT is expected to be relatively small as long as the program is restricted to one province (NTB). DGH has extensive experience in setting up and operating *ad hoc* project management units. But the verification input by PMC is expected to be substantial. Staff of the Auditor General in MPW would benefit from the on-the-job training to be provided by PMC in verification and TFAs of the works.

Bappenas has already taken steps to appoint DGH as the EA and to initiate formation of the TT in DGH and the PIU at the provincial level.

At the national level a Steering Committee would be established, with Bappenas as the chairperson and MoF, DGH, Ministry of Transport -MoT (Directorate General of Land Transportation), and Ministry of Home Affairs (MoHA) as members. MoHA would provide facilitation and coordination in all matters related to the provincial administration. It is expected to play a major role if PRIM is extended to other provinces and possibly to district roads. The Steering Committee would be supported by a consultant, engaged by IndII, who would undertake M&E of the program. This Consultant would also report to IndII and work closely with DGH/PMC and PIU/PIUC.

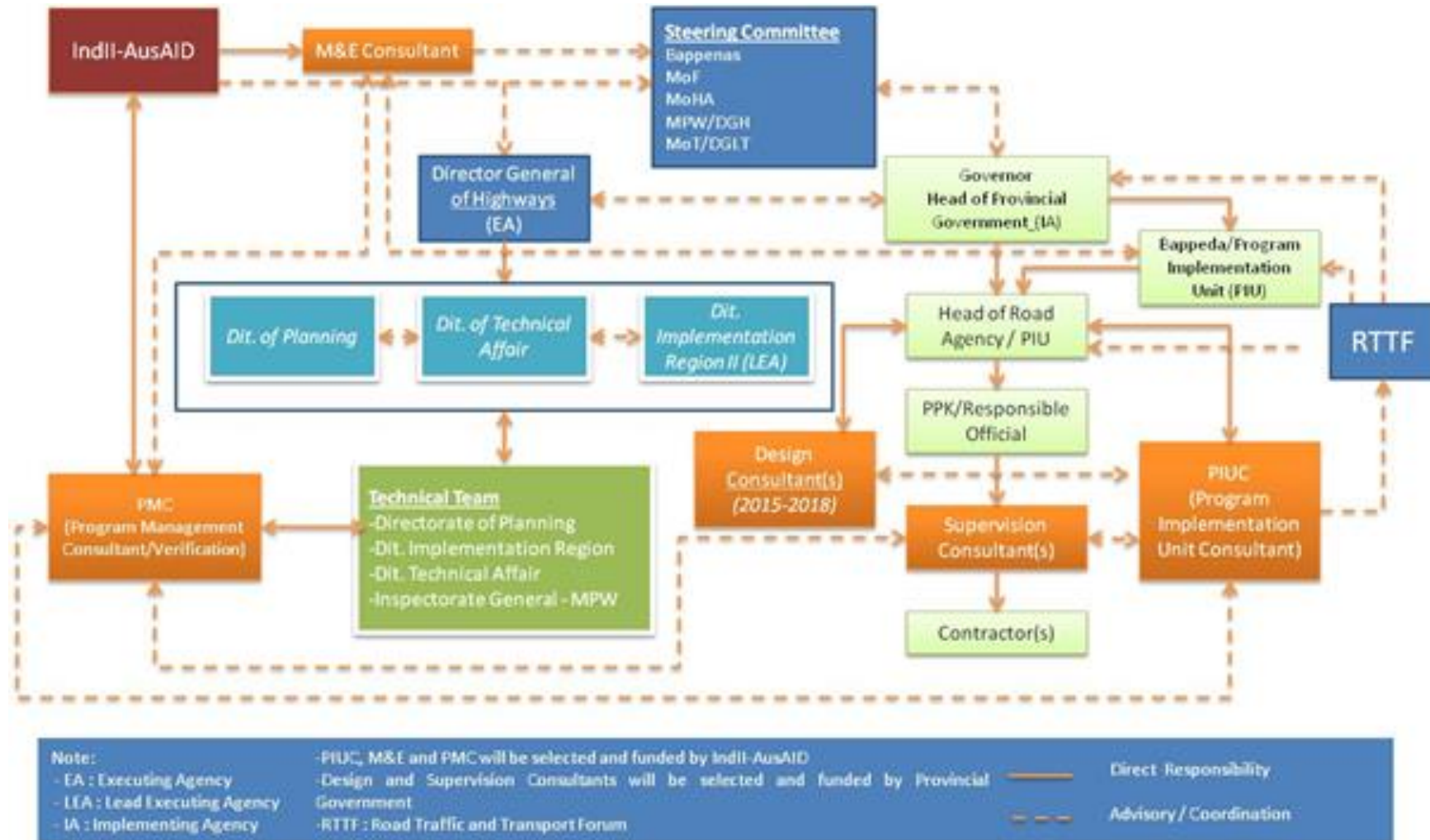
In addition to handling complaints by civil society, the RTTF would seek to improve governance and transparency by addressing inter-agency issues with the agencies represented on RTTF and issues related to the community impacts of the maintenance works (such as road user safety, road worker safety and land issues concerning the road reserve and drainage). PRIM's support to the RTTF would include increasing the public's awareness of road maintenance issues and the RTTF's roles through SMS messaging, website development and community liaison meetings related to plans and works contracts (e.g. on aspects like driveways and access to properties, continuity of drainage systems, etc.); dealing with cross-cutting issues like equitable access to transport for the disabled; reporting to relevant agencies on management of community complaints; and training to RTTF in accordance with the findings of a training needs study to be conducted by PIUC.

4.2 Design and supervision of works

Two options were compared for the design and supervision of works under PRIM. The first involved hiring a consultant using IndII-funded TA; the second, hiring of local design and supervision consultants by DPU using its own funds. The first arguably has the advantages of higher-quality consultants and better-quality completed works, but is not sustainable. The second, preferred, option could possibly result in lower-quality outputs, but is more sustainable, and its disadvantages can be overcome by having the designs and bid documents reviewed by the PIUC and the supervision of construction subjected to quality assurance visits by PIUC and TFAs by the verification team of the PMC.

shows the organisation chart for PRIM in NTB. This was discussed and agreed by all the agencies concerned.

Figure 4.1: PRIM organisation chart



4.3 Verification Team

Although other options were identified and some considered preferable (Annex 5, Section 5.1), MoF's Directorate General of Fiscal Balance has determined that, for the purpose of Government Regulation 2/2012 on Grants to the Regions, the Technical Ministry required to carry out verification is MPW, through DGH. The DGH TT, supported by the PMC, would carry out verification of outputs as well as TFAs during implementation.

4.4 Delivery models for maintenance

The two delivery models to be used for maintenance under PRIM in NTB are Force Account (*swakelola*) and Contract (*Kontrak*). These models are specified under Presidential Regulation 54/2010 as amended by Presidential Regulation 70/2012 covering Procurement of Government Goods and Services. The Presidential Regulation includes a very detailed guideline on how to implement *swakelola* which would be adopted as the basis for improving *swakelola* management under PRIM.

As discussed earlier, routine maintenance would be carried out by improved *swakelola* or by contract. BMW would be carried out in 2014 under seven contracts. Periodic maintenance and rehabilitation works would be undertaken using traditional contracts, but these would also include routine maintenance on the links included in each contract package.

4.5 Packaging of works

The general procedure for packaging would firstly group all works into geographical areas coinciding with the DPU management structure and division of work. These are shown, with preliminary guidelines for packaging works under the budget, in Annex 3. The current geographical division of NTB DPU is into four Periodic Maintenance and Rehabilitation Sections and three Routine Maintenance Regions.

The following approach was used to select the implementation mode and packaging for individual links in Stage 1:

- Due to the need to familiarize staff and contractors with the new forms of contract, the number of maintenance contracts was limited in the first two years and the duration of contracts set to two years or less.
- Individual contracts would cover the full length of the links. The number of links in each contract would be based on construction efficiency and the types of maintenance to be carried out. Generally maintenance by contract would be used on those links where there is a significant amount of periodic maintenance and/or rehabilitation.
- Improved *swakelola* has been used on links not maintained by contract. Maintenance by *swakelola* in 2013 was restricted to about 274 km or 137 km-year (70% of normal) to allow time to become familiar with the improved *swakelola* system.

- To encourage more contractors to bid, contract values are maximized by incorporating as many links as possible in each contract. It is assumed that construction efficiency is possible if the distance separating links in the same contract is less than 10 km.

The seven contracts for backlog and minor works and seven contracts for periodic maintenance and rehabilitation, and the links included in each contract, are shown in Annex 3. DPU is considering reducing the number of contracts to attract larger and more capable contractors which could result in lower cost, better quality and more timely completion of works. The PIUC is expected to look into this issue in more details and recommend appropriate changes for final adoption.

4.6 Procurement arrangements

Procedures for managing *swakelola* applicable to provincial governments are specified in Attachment VI of Presidential Regulation (*Perpres*) 54/2010, as modified by PerPres 70/2012. These list the types of activities that may be carried out, the organisation for preparation, implementation and supervision of *swakelola*, and the components that may include leased equipment or purchased materials.

Procedures for procuring contract works are specified in Attachment III of Perpres 54/2010, as modified in Perpres 70/2012. These are elaborated in Decree of Head of Procurement Policy Institute (LKPP) No. 6/2012 as Technical Guidelines for Implementation of the Presidential Regulations.

The procurement method selected in general shall be Open Tender with post-qualification and electronic procurement. Manual procurement documents are also available.

Some minor modifications to the LKPP procurement documents are proposed for PRIM to make the procedures more transparent and fair to all bidders. Any other modifications in the course of PRIM implementation which would reduce competition, such as restriction of bidder eligibility by geographical origin, may result in a failure to pass verification of works. FIDIC documents may also need to be adjusted.

Consulting services for design and supervision of civil works would be procured according to Appendix IV-A (Procedures for Selection of Consulting Firms) of Presidential Regulation (PerPres) 54/2010, as modified by PerPres 70/2012 and explained in Technical Guidelines from LKPP for Procurement of Goods/Services No 6/2012. MPW has recently increased the monthly rates for staff of consultants. It is expected that the new rates would be reflected in contracts for design and supervision consultants under PRIM. It is envisioned that some modifications would be made to the procurement documents to achieve eventual remuneration at INKINDO rates (Indonesian Association of Consulting Engineers) and payment to consulting staff at 45% of the INKINDO rates.

Consulting services under TA would be procured by IndII using its standard procedures. These services include PMC, PIUC and the M&E Consultants.

4.7 Program implementation schedule

The schedule for preparation and first stage implementation of PRIM to June 2015 is shown in . The PIU and TT have already been established and staffed. The DPA for APBD 2013 (NTB budget) and the DIPA for APBN (central government budget) for 2013 were issued before the end of 2012.

The most critical activity is procurement by IndII of the PIUC to review the engineering design and bid documents currently being prepared by national consultant appointed by the DPU and prepare detailed designs and bid documents for the rest of the works under Stage 1, estimate training needs and prepare the related training program. It is expected that a contract can be signed by end of July 2013. This consultant would help prepare terms of reference for the local supervision consultants and the local design consultant (if Stage 2 is to be implemented). The PIUC would also help procure the contractors for maintenance works and in mentoring and start-up of maintenance by improved *swakelola*, as well as in the evaluation of proposals from consultants and bids from contractors.

The detailed engineering designs and bid documents for works in Stage 1 are expected to be completed by October 2013. Contractors for the works are expected to be selected by December 2013. Works by contract for Stage 1 are expected to be completed by end-June 2015.

The second most urgent priority is procurement of PMC. This is expected to be completed by October 2013. The first disbursement from the AIIG grant is expected by December 2013.

On the Grant side, the DFA between AusAID and MoF is expected to be signed by end-September 2013 and the NPPH between MoF and NTB by end-October 2013. The PMM was issued by the Director General of DGH on 29 April 2013.

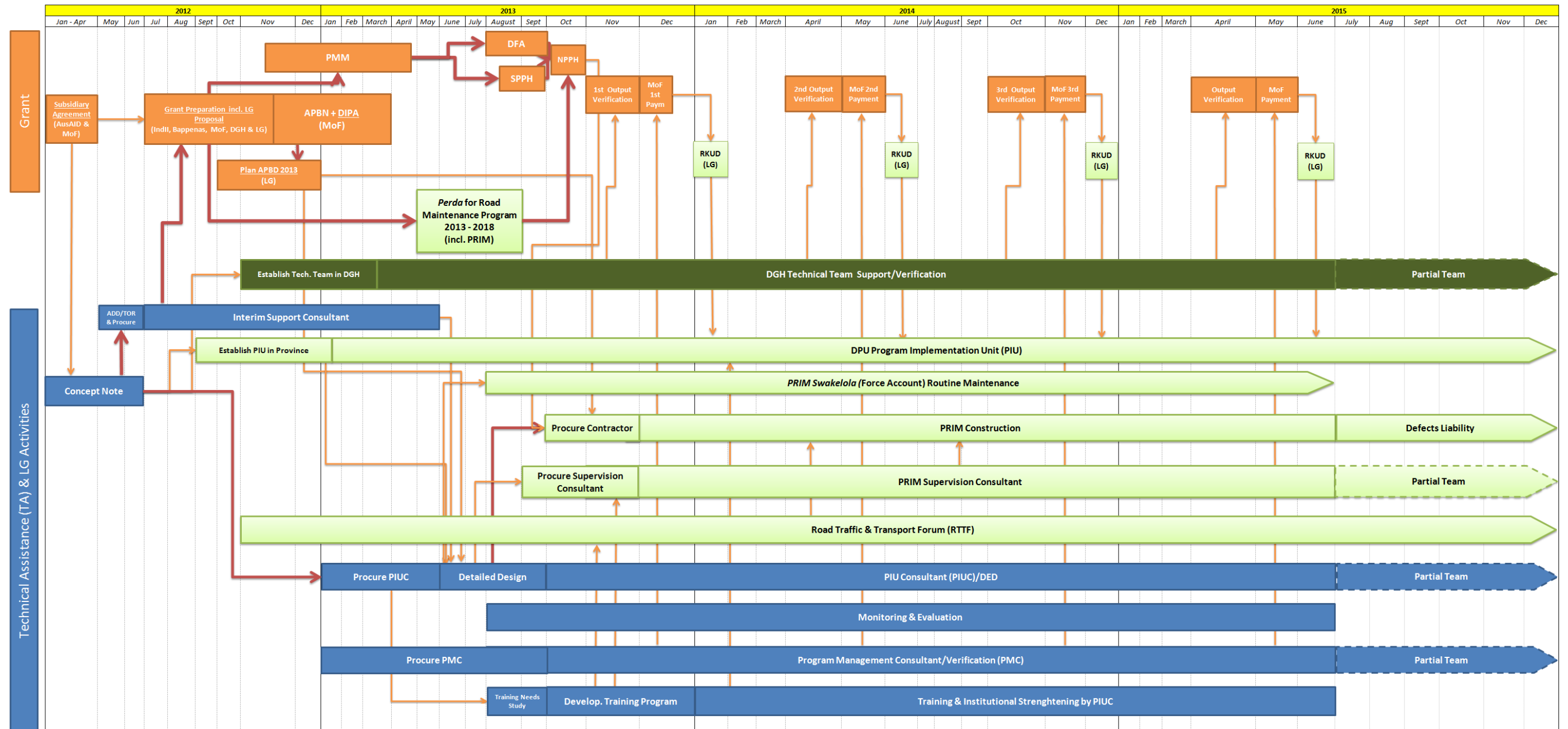
4.8 Readiness for implementation

The DFA can be negotiated when certain readiness criteria have been fulfilled. The status is as follows:

- Performance indicators are based on the verification framework (Annexes 2 and 7) and M&E methodology set out in Annex 8. Baseline data, where not already available, would be surveyed early in the program.
- Funds for 2013 (IDR 30 billion) are included in the 2013 APBD published in December 2012. NTB funds for 2014 and 2015 to meet PRIM needs during Stage 1 would be confirmed by August 2013 - through a provincial regulation (Perda) concerning PRIM annual budgets from 2014 to 2018.

Figure 4.2: Implementation schedule for PRIM

Implementation Schedule for Provincial Road Improvement & Maintenance (PRIM)



- No land is required in Stage 1 and consequently no funds would be required for this purpose. The Environmental and Social Safeguards (ESS) applicable to PRIM are set out in Annex 9.
- The TT was formally established by decree of the Director General of DGH in February 2013. The PIU in NTB has already been established and staffed. The TT is fully staffed. The PMM, which sets out agreed implementation arrangements, has been issued by Director General of DGH on 29 April 2013.
- A statement of commitment would be issued by the Governor of NTB before negotiation of the DFA begins.

4.9 M&E plan

The M&E Plan for PRIM is presented in Annex 8. It is based on a problem statement derived from earlier studies in NTB and a review of past efforts to improve road maintenance in Indonesia and abroad, and following consultations with DGH, NTB DPU, NTB Bappeda, the NTB RTTF and several IndII visits to NTB during 2012. Output performance indicators and outcomes for Stages 1 and 2 have been developed and are included in Annex 8. A series of evaluation questions, also set out in Annex 8, have also been provided as a means of testing the performance and effectiveness of the program. The logic model/results chain would be refined during implementation to ensure that the program remains focused on agreed outcomes and provides evidence of change.

The M&E framework would be implemented by an M&E Consultant funded by IndII. This consultant would prepare and carry out the detailed M&E design, including a detailed implementation plan, a schedule of baseline studies, periodic reviews of progress, and the outline of an annual M&E report.

An M&E report in early 2015 would help decide whether there would be a PRIM Stage 2 in NTB or changes, if any, to PRIM design would need to be made, or if PRIM should be extended to other provinces and possibly districts. Criteria for adding new provinces to PRIM were developed by IndII consultants in 2011. These will be reviewed by the PIU, the TT, the Steering Committee and IndII before deciding how many and which provinces will be added. AusAID would base its scale-up of PRIM on the basis of the following intermediate indicators:

- Improved governance and Institutional performance
 - RTTF has established SOPs for informing the public and handling inputs and complaints.
 - RTTF held at least two public forums in 2014 and disseminated the results to the public. The forums should be announced in advance, including an agenda.
 - M&E plan has been developed; values of indicators for base year and future years of PRIM implementation (2014, 2015, 2016, 2017, and 2018) have been measured or estimated; and an M&E report covering the period ending in December 31, 2014 has been prepared and submitted to IndII/AusAID, GoI and NTB.
 - Training program has been developed and at least 60% of agreed targets up to end-2014 have been achieved.
 - Annual work program for 2015 was developed by NTB DPU staff with assistance from PIUC on basis of agreed PPB procedures.
 - Works in 2014 and works for 2015 are entered in provincial budget.

- Proposed works for 2014 and 2015 are announced on NTB website.
- Implementation of work programs
 - At least 65% of the targets for physical works in 2014 (routine maintenance by *swakelola*, routine maintenance by contract; BMW; periodic maintenance; and rehabilitation) set out in the M&E plan are achieved.

4.10 Safeguards

4.10.1 Governance/anticorruption

PRIM addresses the issues of governance, accountability and transparency through direct support to RTTF. However, there may be opportunities for corruption in the implementation of PRIM. These can occur during the procurement of design and supervision consultants through provincial government systems; procurement of contractors and execution of works by contractors; and the verification process which could present a rent-collection opportunity. Mitigation measures under PRIM include development of an anti-corruption action plan (ACAP); hiring of the AusAID-funded PMC who would carry independent verification and technical and financial assessments of works; and support for the RTTF.

The verification mechanism would act as a big deterrent to corruption related to shoddy work: work which is not verified would not receive the results-based contribution (up to 40% of cost of works) from the AIIIG grant. The RTTF, with its focus on transparency and involvement of civil society, would also deter bribery related to procurement of contractors and consultants and poor quality of construction.

All activities under PRIM would adhere to the three pillars of the 2004-2009 RANPK: prevention, enforcement and monitoring and evaluation. They would also be guided by Australia's anti-corruption approach: building constituencies for anti-corruption reform; reducing opportunities for corruption; and changing incentives for corrupt behaviour.

The ACAP developed for PRIM identifies risks and constraints and provides measures to address them. Annex 10 presents the ACAP. Moreover, the grant agreement for PRIM is expected to include a mechanism for recovery of funds from NTB should there be evidence of ineligible expenditure after the grant has been disbursed.

4.10.2 Environment protection and biodiversity conservation

As most of the sub-projects to be included under the proposed pilot program involve relatively small works within the existing RoW, the program is unlikely to have significant environmental impacts, and can be classified as environmental Category C. Standard environmental clauses (SEC) applicable during construction, the Environmental Safeguards of the Contract Specifications, and the Environmental Management and Monitoring Plan would suffice to minimise the risk of environmental damage in most cases. However, during implementation of PRIM circumstances might arise (such as floods and slides) that might necessitate preparation of additional environmental and social safeguards, including land acquisition and resettlement action plans. Consequently, full environmental and social safeguards were prepared to suit the application and as

a demonstration to provincial governments that environmental and social issues should always be carefully considered, even if they subsequently require no interventions.

4.10.3 Environmental and social safeguards

The Environmental and Social Safeguards (ESS) for PRIM are based on the EINRIP ESS with some refinements prepared for the WB Western Indonesia National Road Improvement Project. They include all the relevant GoI ESS requirements. They comply with the requirements of the IndII's Environmental Compliance Strategy and Environmental Management Process (ECOMAP 2010) and AusAID's Environmental Management System (Environmental Management Guide for Australia Aid program 2012), which in turn is consistent with the Australian Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 (EPBC).

The ESS identifies the requirements of all environmental and social safeguards, including those relating to potential land acquisition and resettlement. These include:

- the preparation and approval of an Environmental Impact Assessment (AMDAL) where significant environmental impacts may occur;
- the preparation and approval of an environmental management plan (UKL) and/or environmental monitoring plan (UPL) where other environmental impacts may occur;
- the submission of an Environmental License where an AMDAL or UKL/UPL is required;
- the preparation and approval of a SPPL where an AMDAL or UKL/UPL is NOT required; and
- the preparation and approval of a land acquisition and resettlement action plan (LARAP) or Abbreviated LARAP where land acquisition or resettlement is necessary.

4.10.4 Land acquisition and resettlement policy framework

Though these may not be relevant to small-scale maintenance works, the LARPF provides a detailed description of all land acquisition and resettlement requirements if any land is required outside the present ROW. The new Land Acquisition Law (Presidential Proclamation No. 2/2012) and Regulation PD 71/2012 regarding land acquisition and compensation would be used where the LARPF provides less specific instructions.

4.10.5 Environmental safeguards

Environmental safeguards are specified in the various standard environmental clauses (SEC) applicable during the construction phase; the Environmental Safeguards of the Contract Specifications, and the Environmental Management and Monitoring Plan. These requirements are applicable to all PRIM sub-projects during the construction stage irrespective of whether the development takes place within or outside the RoW.

Experience with implementation of EINRIP shows that some contractors have failed to control dust during construction, which led to health problems among some of those living near the road. Also, worker health and safety measures identified in the environmental action plan were not in force as most of the workers do not wear safety devices (goggles, ear plugs, etc.). Not all impacts are negative, however. Social surveys in Sumbawa under EINRIP showed general support for the road

projects. They provide employment and commercial opportunities during construction and the improved roads are expected to facilitate transport for personal and business purposes.

Annex 9 gives a detailed description of the ESS. A separate document, Environmental and Social Safeguards, is available and would constitute part of the PMM. This document includes various annexes on the format of UKL/UPL and AMDAL reports, guidelines for preparation of UKL/UPL and AMDAL, report formats for LARAP and Abbreviated LARAP, the environmental safeguards specifications, formats for the environmental monitoring and management plan (EMMP), and maps showing land use and the location of conservation areas and indigenous vulnerable people (KAT) in NTB.

4.11 Cross-cutting policy issues

PRIM gives attention to cross-cutting issues in compliance with GoI and AusAID guidelines covering poverty, gender equality, disability, HIV/AIDS and child protection.

4.11.1 Poverty

NTB is the fifth poorest province in NTB. PRIM is not specifically directed at the poor, but through increased all-year reliability of access under the program the whole population would benefit, including the poor, who would have better access to services and markets. Improved road conditions would reduce transport costs and together with better year round access would reduce the costs of basic needs, facilitate public transport and help improve access to health, education and other social activities, as well as income-earning opportunities.

Greater attention to routine maintenance could potentially increase the use of labour where that can be shown to have a competitive advantage over equipment, thus over time increasing employment opportunities, including for the poor.

Improved road conditions and attention to road safety provided under PRIM are expected to result in fewer fatalities, personal injuries and disabilities, and less property damage. This is especially important to the poor and near poor who are most vulnerable to economic shock resulting from traffic accidents.

4.11.2 Gender equality

Gender equality in development is of interest to both GoA and GoI. Both are signatories to the Convention on the Elimination of all forms of Discrimination against Women (CEDAW). GoA policy requires that gender equality is taken into account in all development activities, while GoI Presidential Instruction (INPRES) 9/2000 and the Medium Term National Development Plan 2010-2014 (RPJMN 2010-2014) require that gender is mainstreamed for more effective and equitable development. The IndII gender strategy and plan provide strategic direction and actions for improved gender equality which are required to be integrated into all IndII-supported activities.

PRIM would encourage the recruitment of women by contractors and consultants. For *swakelola* activities, the government, institution or community group involved²⁴ would be encouraged under PRIM to recruit women workers as well as men. Contractors, consultants and government would be required to provide timesheets which show the numbers and positions of women and men in their teams.

Women from local communities who have the required level of education may be attracted to the position of Road Inspector (*penilik jalan*), as defined in the Decree of the Minister of Public Works No 13/PRT/M/2011. This position is to report on road events and conditions, and requires training in what to observe and in completion of the forms. The work may be of particular interest to women because it does not require them to travel far from where they live and thus gives them more time to balance their domestic and income-earning work.

Where there is training to improve the capability and skills of road maintenance workers, women would be given the same opportunity as men to participate.

NTB would be encouraged to include appropriately experienced and qualified women on the RTTF where appropriate, based on their positions in government, business, academia and the community. The RTTF would disseminate information about road and transport issues (including how to access this information and the process for raising road-related issues for consideration by the RTTF) to a wider audience including local women's organisations and women leaders.

4.11.3 Disability

Gol Law 4/1997 concerning People with Disability states that people with disability have the same rights as everyone else including the right to accessibility for their independence. Government Regulation 43/1998 concerning efforts to Increase the Social Welfare of People with Disability specifically requires access to and from public roads, access to bus stops, the provision of sidewalks suited for pedestrians and wheelchairs, road crossings, set-down areas, clear signage, and information provided to people with disability about accessibility measures.

The NTB provincial road network is predominantly rural, however, so only limited opportunities may become available for improving access for people with disability. Engineering designs of sub-projects under PRIM will give special consideration to gender, child protection and disabled persons (for example to facilitate pedestrian, handicapped and public transport access). Already, following a review of preliminary designs prepared for the first round of contracts, a semi-urban section of road has been singled out for special treatment to ensure that these human needs are properly addressed in an early demonstration of the appropriate approach.

4.11.4 HIV/AIDS and child protection

In comparison with the world as a whole, Indonesia has a low rate of People Living with HIV/AIDs (PLWHA). NTB has a 37% lower prevalence of PLWHA than Indonesia overall. But research shows that there is a low level of awareness and understanding about HIV/AIDs in NTB.

²⁴ See Presidential Regulation No.54 2010 for the Procedures for Self-Managed Works for the types of entities who can participate in *swakelola*.

Unlike a new road construction or a capacity expansion program, PRIM involves small-scale work over relatively short implementation periods. This does not allow sufficient time for meaningful and sustained HIV/AIDS interventions and has the potential for misunderstanding, confusion or tension in the community with no possibility of addressing the problem with longer-term intervention. Further, most contractor and swakelola personnel are expected to be local (i.e. not the mobile men with money who visit for big-ticket projects). Moreover, NTB has a fairly low prevalence of identified PLWHA. Under these circumstances, it is proposed that PRIM not consider HIV/AIDS in NTB. Instead, it is best to address HIV/AIDs in a more appropriate mechanism than PRIM where it can be dealt with comprehensively and achieve real and effective outcomes.

PRIM does not address child protection. But the PIUC will help ensure that bid and contract documentation and works supervision procedures expressly prohibit exploitation of child labour, and that work-site protection arrangements ensure the safety of children and other pedestrians (with specific protection measures being mandated in the vicinity of schools and medical facilities).

4.12 Critical risks and risk management strategies

PRIM addresses complex issues by promoting greater accountability aligned to a clearer mapping of problems. This approach needs to be well-communicated and given time to work due to its relative novelty. The potential benefits to the public of improved roads should offset the risks of an innovative approach, so the risks have been identified and appropriate mitigation measures included in the program design. Several meetings were held with NTB Government and RTTF to explain PRIM, including a meeting with the Financial Bureau, Bappeda, DPU and members of the DPRD. PRIM would be socialized by IndII in April-May 2013 and by the PIU/PIUC during preparation of detailed engineering designs and implementation of the program.

M&E takes on great significance for ongoing risk management, as risks would become more evident as the program proceeds.

The contractor would be responsible for completing the works to specification, and would bear that risk as long as the Supervisor and Responsible Official are not compromised. However, if poor quality work is accepted by the Supervisor and Responsible Official, the risk shifts to the Provincial Government, which would not receive the grant amount, or would receive a reduced amount, if the Verification Team does not accept that the work has been properly carried out. Therefore, the Provincial Government would have an incentive to see that the Contractor, Supervisor and Responsible Official perform well, and should mitigate the risk by procuring good contractors and good supervisors, and by selecting good responsible officials.

Incentives and sanctions for consultants and contractors to perform well were considered. Financial incentives are difficult to administer and audit. Financial sanctions for contractors were also considered and deemed administratively difficult too. However, there is a case for penalizing supervision consultants for approving works which do not get verified. This will be discussed with NTB and DGH at the time of drafting requests for proposals, and if approved, at pre-bid briefings. Also, contractors and consultants who do not perform well could be blacklisted or forbidden from bidding for a period of time. Consultants and contractors would be briefed to expect that good performance will improve the prospect of winning future bids.

Financial incentives for routine maintenance by *swakelola* can be considered during implementation based on results achieved and recommendations of the PIUC/DPU. Non-financial incentives are also useful to elevate the image of routine maintenance workforces and their pride and confidence. Such incentives include exposing good performance to the public, announcing names of best performers on a periodic and consistent basis, providing good equipment and facilities as well as appropriate working capital, and assigning highly respected and well performing officers to the *swakelola* teams.

A high risk is that local government financing would not be provided in the required amounts or at the appropriate time, and in case of severe budget constraints, major works would be preferred to routine maintenance. In that case overall road conditions would continue to worsen. The design of PRIM gives priority to routine maintenance. The likely funds available from NTB during Stage 1 were considered in developing the maintenance program for that period. Further, the Governor of NTB would issue by August 2013 a provincial regulation (Perda) concerning the annual budgets allocated to PRIM during 2014-2018.

Another high risk relates to possible slippage in the time schedule to implement PRIM. The time schedule shown in and discussed in Section 4.7 is tight. Past experience with road projects financed by donors have shown that delays in project completion are a major problem. PRIM includes the services of consultants (interim support consultants as well as PIUC and PMC) to expedite implementation, including assistance to RTTF, preparation of training needs study, engineering designs and bid documents. Procurement by NTB will not be subject to “no objection” from IndII, which should result in some time savings. NTB government and DPU want to start implementation as soon as possible. IndII and AusAID have offices in Jakarta which should speed up addressing problems that might arise during implementation as well as decision making.

A further risk pertains to the potential fluctuations in the exchange rate of the Australian Dollar versus the Indonesian Rupiah (IDR). PRIM was prepared assuming 1 Australian Dollar is equivalent to IDR 10,000. However, the Australian Dollar has lost value recently and there is risk of further drop. This risk can be addressed by either increasing the amount of the AIIG grant, or reducing the contribution from the AIIG grant to civil works from 40%, or reducing the overall size of PRIM.

Ever-present risks relate to procurement and supervision of works. The concomitant issue of fraud and corruption and measures to mitigate it were addressed in Section 4.10.1. The independent verification of outputs should also reduce corruption because work which is not verified would not be eligible for reimbursement from the grant. The integrity of the verification process would be ensured by the independent reviewers (technical and financial auditors other than PMC) retained by IndII. The services of those auditors would probably be needed once (around July/August 2014) in Stage 1.

The Risk Matrix in Annex 11 lists the key risks, assigns a subjective rating to each, and summarises the mitigation measures that have been included in the Program design. These main risks are discussed below.

4.12.1 Availability of funds to pre-finance works

PRIM is not a co-financing arrangement: NTB has to pre-finance the works and the AIIG grant incentive (up to 40% of cost) is paid if completed works are verified to have met the agreed criteria. Consequently, there is a risk that the Province does not have the funds to pre-finance the maintenance. NTB is a poor province with low fiscal capacity. The Province has provided a substantial “acceleration budget” for road works during the years 2011 and 2012 and has budgeted IDR 180 billion for 2013 which constrains the amounts it can make available to PRIM in 2013. IndII held several meetings in 2012 with the NTB Government on this important issue. The works program discussed in Section 3.5 is based on likely sums NTB can provide. NTB is committed to implementing PRIM and has issued a formal letter in this regard to Bappenas and MoF in December 2012. The 2013 budget for PRIM (IDR 30 billion) is stated in APBD 2013 issued by NTB in December 2012, and NTB is committed to issue by August 2013 the Perda concerning annual PRIM budgets thereafter.

4.12.2 Elections for provincial governor in 2013

The Governor election in 2013 was the main reason why the Provincial Government proposed the *Raperda* to secure PRIM financing after 2013. The Province already has a long term plan 2005-2025 (RPJPD) issued as Perda 3/2008, which supports road development. The present Governor strongly supports the PRIM program and has completed only one term, so is eligible for re-election in 2013. Thus, the risk of a complete change in policy is considered low.

The swearing-in of the re-elected Governor is scheduled for September 2013. One year after that, in September 2014, a new Provincial DPRD will be sworn in following nationwide parliamentary elections. There is a remote chance that the new DPRD may oppose the maintenance priority of PRIM, although the history of local government suggests that the road sector would still be highly favoured. Successful early implementation would reduce this risk, together with good communications with central and local government agencies and current members of the DPRD.

4.12.3 Capacity of provincial works agency

The DPU has cooperated fully in the preparation for PRIM, is aware of the program’s design, and understands that it would be given responsibility to manage it. It would be assisted by the PIUC, selected by IndII. As noted earlier, this assistance includes mentoring in managing the program, preparing annual work programs, reviewing engineering designs and bid documents prepared by local consultants, overseeing the work of supervision consultants, and providing feedback early in the verification process to avoid unexpected outcomes.

Other mitigation measures include clear definition of requirements throughout the program, and consultations with other agencies through the PIU and RTTF to ensure that the overall objectives are maintained. It is therefore judged that the capacity risk in NTB is low to medium.

4.12.4 Swakelola work-force perceptions

A potential risk relates to concerns which may be felt by road agency staff involved in *swakelola* activities about the introduction of maintenance by contract. Employees might feel their jobs are in jeopardy. However, most of the labour force are casual appointees and not permanent staff, and

consequently would not experience sudden dismissal. Moreover, PRIM provides a renewed focus on *swakelola* performance, with a large program of clearly-defined works and a new emphasis on management which should help produce the required outputs and maintain job opportunities for those involved. The efficiency and effectiveness of an improved *swakelola* system would be compared with that of routine maintenance by contract in the first two years of implementation.

Nevertheless, some negative social impact remains if this is the workers' major source of income and a shift to contracting continues. It is likely that mechanisms for the transfer of labourers to the private sector would need to be established. Views of the RTTF and civil society in this regard would be valuable.

Based on available information, it is believed that the risk of layoffs for *swakelola* staff is medium and the magnitude would be better defined by June 2015 once the results of a comparison of the two approaches are available.

A related risk is the perceived lower income received by *swakelola* workers due to tighter working conditions and supervision under PRIM. This could result in lower quality and slower delivery of works. This risk can be reduced by carrying out awareness campaigns to raise the profile of maintenance, especially routine maintenance; investigating different approaches to organisation and payment; and implementing non-financial incentives as mentioned earlier. Overall, this risk category is considered to be medium.

4.12.5 Capacity of local contractors and consultants

Local contractors and consultants might have limited capacity to engage effectively with the capacity-building activities under PRIM and hence have trouble in achieving the required work quality.

The risk of selecting (or not terminating) poor quality contractors and consultants can be reduced by a strengthened procurement process with greater competition, and ensuring that bidding is open to all Indonesian contractors and consultants and is not restricted to those from NTB. Further, PRIM provides for: (a) training of local consultants and contractors, (b) review of engineering designs and bid documents as well as quality assurance of construction activities and their oversight by the PIUC, and (c) TFAs by the PMC. The province should continually be made aware of the potential loss of grant funds through poor work. The management of this risk should be one of the criteria for determining eligibility of other provinces for participation in the program.

Overall, the risk of low capacity of local consultants and contractors is considered to be high.

4.12.6 Verification of results

The verification mechanism (Annex 5) would be specified unambiguously in the DFA between AusAID and MoF. However, there is a risk that verification standards would become relaxed and disbursements made for incomplete or inadequate work. PRIM mitigates this risk through the PMC who would support the TT in carrying out verification after preliminary handover of works. The PMC would also undertake TFAs during implementation to reduce the chances of works not being verified. Further, IndII would use independent consultants to evaluate the work of the TT and its

PMC in maintaining the integrity of the verification process. Consequently, it is judged that this risk is medium. In any event, any potential financial risk to AusAID is limited: if performance is poor, no grants would be payable. Further, as indicated earlier, grant funds would be recovered if there is evidence of ineligible expenditure after the grant has been disbursed.

4.12.7 Truck overloading

The improved roads expected to result from PRIM would attract more and heavier trucks which may lead to accelerated deterioration of the roads. The issue of truck overloading is a national problem not restricted to PRIM.

PRIM addresses this firstly by adopting the improved pavement design standards recently adopted by DGH for longer-life of pavements, and by accounting for realistic axle loads in the design process. The issue is also addressed by the incentive for the Province to ensure that work quality is in accordance with specifications, as mentioned above. However, national programs (such as the one piloted under the WB-financed Sumatera Region Roads Project in 2004-2006) for addressing overloading of trucks are required, and probably constitute a good area for future involvement of AusAID/IndII in Indonesia's road sector.

4.12.8 Uncertainty regarding extension of current funding

The risk that AIIG grant funds would no longer be available after June 2015 is recognised, and the program has been prepared to allow a clean break if such an event occurs. The sustainability of PRIM may also be assisted if funds from additional sources like the Road Preservation Fund become available and can be used to support provincial road maintenance programs. However, continuation and expansion of PRIM in the future is more a function of its success: the more successful it proves to be, the higher the likelihood of finding the necessary funding and extending it to other provinces.

Overall, the risk that AIIG funds dry up after June 2015 is considered low to medium.

4.12.9 Appointment and funding of design and supervision consultants

As discussed earlier, it was decided that the Province would hire and fund the services of consultants for design of works in Stage 2 and supervision of maintenance works in both stages. This could potentially result in lower-quality works. This risk is mitigated by the Province's incentive to ensure that all of its work is accepted at verification, and by the TA provided under PRIM – especially the training of local consultants and contractors, the PIUC's review of designs and bid documents and oversight of supervision consultants and contractors, and the TFAs carried out by the TT and PMC.

It is judged that the risk associated with the province hiring and financing design and supervision consultants is medium to high.

4.13 Sustainability: why PRIM could succeed when previous efforts did not

PRIM recognizes the reasons for the road maintenance problems and includes concrete measures to address them. For example, PRIM focuses on routine maintenance and does not rely on promises. PRIM's design reflects lessons from recent international experience. It holds road agencies accountable for results and improves governance and transparency through support to RTTF. It

includes a strong anti-corruption action plan. It maintains a limited role for improved *swakelola* and introduces maintenance by contract. It adopts results-based arrangements in contracting for maintenance works.

PRIM provides institutional strengthening (training for personnel in provincial government road offices; improvements to the *swakelola* system and mentoring of personnel; training of procurement committees; training of national contractors and consultants). It includes verification of completed works, and provides for monitoring and evaluation of the pilot program.

PRIM provides substantial financial incentives to effect both institutional and technical change, rewarding output quality and institutional performance. PRIM has been designed to be sustainable through its emphasis on working through and strengthening existing government systems and procedures, using local consultants and contractors, training provincial staff and increasing the pressure of accountability for performance.

PRIM's implementation would be gradual and manageable within the Province, with an initial emphasis on routine maintenance to be followed by periodic maintenance and rehabilitation.

Based on the above, it is believed that PRIM has a reasonable chance of success and sustainability. A comprehensive M&E system has been devised to help guide and monitor the process, and to allow adjustments as necessary. It would also help decide whether changes need to be made to PRIM design, and whether to extend PRIM to the second stage in NTB and possibly to other provinces or districts.