1. Key development issues and rationale for Bank involvement

In the past few years, India has emerged as one of the world’s fastest growing economies. Since 1990, its economic growth rate has more than doubled, rising from 1.9 per cent per capita during 1961-1990 to 4.6 per cent in 1991-2008. In 2008-09 real per capita income stood at US$1040, more than double the 1993/94 level. Rapid growth has contributed to reducing poverty but at a slower rate than in other countries. Agricultural growth has been volatile and only 1.6 per cent in 2008-09. Weaknesses in basic rural infrastructure – from roads to electrification – have constrained poverty reduction and agricultural growth and limited opportunities for the 60 percent of the population dependent on agriculture and related activities. Of the 300 million people who lived below the official poverty line in 2005, nearly 60 percent were in the lagging states and most lacked access to all weather roads. Thus, “empowering” rural India through the provision of basic roads access has emerged as one of the key priorities for the Government of India (GOI).

Transport sector issues. India has one of the largest and densest road networks in the world with a total of 3.3 million km. The national and secondary roads comprise just 15 percent of the network but carry 80 percent of the traffic. The extensive rural roads network constitutes 2.7 million km but carries just 20 percent of the traffic. Despite its importance to the national economy the road network is inadequate because of capacity constraints at the national and secondary level, as well as the poor condition of the overall network. At the rural level the neglected network has meant that 30 percent of the population lack reliable year-round access and is effectively excluded from use of basic social services and participation in the formal economy. Rural road connectivity is one of 27 indicators in the Eleventh Plan and it targets to ensure all weather road connection to
all villages with population 1000 and above (500 and above in hilly and tribal areas) by 2009, and all significant villages by 2015. About 30 percent of India’s 855,042 villages (or 300 million people) are still not served by all-season roads and there is a wide disparity in connectivity among states.

**PMGSY rural roads program.** The GOI launched the Pradahn Mantri Gram Sadak Yojana (PMGSY), the Prime Minister’s Rural Roads Program, in late 2000 to address the problem of poor rural accessibility in a more systematic way. The PMGSY originally sought to provide all-season road access for every community with a population greater than 1,000 by 2003, and all villages with population greater than 500 by the end of the Tenth Five Year Plan in 2007. Although the PMGSY has not achieved its initial targets - mainly due to lack of resources and limited implementation capacity, its achievements have been very significant. It has been identified as one of India’s 60 success stories since its independence according to a survey conducted by “India Today”.

The PMGSY program has been under implementation since 2000 and has been gradually improving over that time. The program has a sound design and clear set of operating procedures. It includes systematic planning, use of a rural road manual for technical design, rigorous examination of design reports by outsourced agencies, a three-tier monitoring system for quality control, an environmental code of practice, and a web-based management and monitoring system (OMMAS).

The length of the new and improved rural road network under the program has increased from about 51,500 km in 2004 to an estimated 214,200 km in 2008-09. Implementation capacity has been greatly enhanced over time, with about 52,400 km completed in 2008-09, compared to 15,500 in 2004-05. The number of villages connected has increased from 13,800 in 2004 to about 62,500 in 2008-09. This achievement is short of targets, however, as it is estimated that less than 45 percent of targeted villages are connected.

Total expenditure to date on the program has been US$13.6 billion and it is estimated that a further US$40 billion will be required to complete the program by 2017. The program was originally to be funded through 50 percent of the levy on high speed diesel but today this meets only 25 percent of requirements. The balance of funding is made up from direct budget support and loans from National Bank for Agriculture and Rural Development (NABARD) the ADB and WB. The program has been reasonably successful in targeting expenditures to the poorer states with 60 percent of expenditures allocated to the lagging states which have 70 percent of the eligible roads. The program has also been successful in creating much needed rural employment. It is estimated that for an expenditure of IRs 10 million in rural roads, about 40,000 man-days of employment are created through construction and subsequent maintenance activities. By the end of the program over a billion man-days of employment will have been created by the program.

**Improving efficiency of program delivery.** The unit costs of construction have been increasing under the program both because of increased input prices and the increased difficulty in connecting more remote habitations. The roads are being built with a bituminized surface both to respond to community preferences but also to minimize future maintenance requirements but there is scope for adopting a wider range of design standards. As the program increasingly connects smaller habitations, there may be scope for providing unsealed roads and increasing the use of locally available materials. There are also heavily used PMGSY roads that have not been designed for actual traffic conditions and are prematurely failing. In these cases concrete pavements may provide the best solution for minimizing whole life costs. The PMGSY program in conjunction
with the Indian Roads Congress (IRC) has been working on developing a wider range of design standards and technologies, the implementation of which could lead to a significantly more effective use of resources.

In terms of value for money from the procurement process NRRDA claims that PMGSY procedures compare favorably to those of the World Bank. Their assessments in Rajasthan and Uttar Pradesh suggest that in all aspects of time to award contract, completion of civil works on schedule, competitiveness of winning bid price compared to cost estimate and quality of works, PMGSY administered procedures delivered equivalent outcomes. This would need to be further evaluated through complementary analytical work.

As highlighted by an independent World Bank procurement review there are remaining governance issues, particularly in procedure implementation. Major areas of concern include poor record keeping, lack of transparency, poor contract management and a lack of competition for some contracts. The program is trying to address governance issues in a number of ways including publication of procurement documents on the website, moving to e-tendering, strengthening the three tier quality control system and introduction of a complaints system. Given the dispersed nature of these works, however, there is still a need for greater involvement of the communities in oversight of implementation and subsequent operations. There is also a need to build capacity in the contracting industry so that it can keep pace with the increasing size of the program.

**Improving the sustainability of program outcomes.** Inadequate maintenance remains the major problem to be addressed in PMGSY and the rural roads sector more generally. Under the program, contractors are required to maintain the roads built for five years after completion of investment. The States are expected to provide funding both for the initial five year maintenance contract and then subsequent road maintenance activities. Efforts have been made to ensure regular maintenance, but the results are far from adequate. It is estimated that only 30 percent of maintenance requirements are met for the network as a whole and even under the five year maintenance contracts surveys reveal that only 25 percent of roads are fully maintained with 30 percent not receiving maintenance at all. For lack of adequate maintenance, a road becomes rapidly un-passable and un-maintainable, and the result is that the net number of habitations connected increases at a much slower rate than originally anticipated.

This concern is shared by government and in preparation for the 13th finance commission, which is expected to report in the first quarter of 2010, MoRD have presented a detailed report detailing their recommendations for improving rural roads maintenance. The MoRD report recommends an increase in federal grants to states to support maintenance at a rate of US$1.8 billion per year in return for increased allocations for maintenance at the state level (15-20 percent per year) and setting up the necessary institutional and organizational arrangements to deliver the maintenance program. The report also suggests a program of independent monitoring both to ensure proper use of funds and as a feedback mechanism to tailor support to states. At this stage it seems likely that the commission will increase commitments to rural roads maintenance and a key element of Bank support to the sector will be to support the implementation of these recommendations.

Key elements that need to be addressed include the development of state level policies to set out the long term management and ownership of the network; collecting basic inventory and condition data for the network to allow preparation of maintenance plans; strengthening the mechanisms for the execution of maintenance works; and increasing the role of the Panchayat Raj Institutions (PRIs) and communities in the planning, finance and execution of maintenance works.
Analytical underpinnings for the operation. There is a substantial analytical underpinning to the rural roads sector in India chiefly carried out by GoI, the World Bank and ILO. These include GOI’s Working Group on Rural Roads for the Eleventh Five-year Plan, 2006, the Rural Roads Vision: 2025 supported by the World Bank, and detailed maintenance strategies carried out by the ILO. These high level strategic documents have been supported by numerous more detailed studies covering policy, funding, institutional development, maintenance and technical design issues. To specifically support this operation there is on-going work to review the outcomes of the program, to assess the performance of public expenditure in the sector, analysis of road construction costs and an assessment of the performance of the institutions involved in the delivery of the program.

Rationale for Bank Involvement. The proposed operation is fully aligned with the Country Assistance Strategy (CAS) for FY09-12. The overarching objective of the CAS is to help India achieve the long-term vision encapsulated in the Eleventh Plan of a country free of poverty and exclusion. The first pillar is focused, among other areas, on removing infrastructure constraints to growth in rural areas. The proposed operation is expected to contribute to one of the CAS’s objectives of making growth inclusive through support to sustained improvements in road connectivity and removal of infrastructure constraints to growth in rural areas. The operation is also expected to contribute to the second and third pillars of the CAS by focusing on improved management of environmental aspects in PMGSY implementation, and enhancing the development effectiveness of public spending through improved demand-side accountability mechanisms, including beneficiary and civil society involvement. Given that the majority of funds under the PMGSY program are allocated to lagging states it will also contribute towards the CAS objective of supporting lagging states.

This operation will also continue the long engagement the Bank has had in the rural roads sector in India both through stand alone rural roads projects and where rural roads have been financed as components under rural development projects. The Bank has been involved with the PMGSY program since its inception and contributed to many of its operating procedures and sector approaches such as the definition of the core network, maintenance management principals and capacity building. The first rural roads project supporting the PMGSY program (RRPI - $ 400 m) is currently under implementation in the states of Himachal Pradesh, Jharkhand, Rajasthan, and Uttar Pradesh. This operation will build on previous experience in the sector, the strong design of the program, and transition to a more broad based support of PMGSY with a greater focus on overall program results and less on individual transactions.

2. Proposed objective(s)

The project development objective is to increase the efficiency of the PMGSY program to provide beneficiary communities with all season road access to markets and social services in a cost effective and sustainable manner.

Measurement of the PDO will be through increases in the rural population served by all weather roads; improvements in the condition of the core road network; and increased implementation capacity in lagging states.
3. Preliminary description

The proposed project would be a US$1.5 billion Specific Investment Loan (SIL) that uses a SWAP approach to support implementation of the PMGSY program over a five year period. There are three key dimensions to the proposed instrument: 1) The project aims to reimburse civil work and non-civil work eligible expenses associated with the PMGSY program at three month intervals. 2) These reimbursements will also be based on achievement of a set of disbursement-linked indicators (DLIs) determined in partnership with the Government. 3) The project would also have a TA component of about 2 percent of total Bank financing that would disburse against presentation of statements of expenditures (SOEs), as in traditional TA operations.

A SWAp based approach is being proposed because the added value from Bank involvement comes from supporting improvement in the efficiency and sustainability of the overall program. By addressing these issues through a national program such as PMGSY the Bank has greater leverage in affecting improved outcomes in all states. The results based approach keeps the focus on the key sector issues rather than the more transaction orientated approach of a conventional investment loan. Annex 1 provides the details of the type of result-based approach envisaged for this operation.

The project can be summarized as follows:

Priority objectives:
- Enhancing operations of the PMGSY to provide more effective delivery of infrastructure
- Introducing systematic maintenance of assets to ensure their long-term durability
- Human resource development to support the above objectives with a particular focus on lagging states

Selected disbursement-linked indicators:
- PMGSY provides all weather access to 10,000 communities per year.
- PMGSY develops a menu of design standards that states could apply to improve cost effective delivery of infrastructure
- Actions to develop greater competition and transparency from the procurement process
- State level maintenance policies adopted
- States to develop road inventory and road condition databases to support preparation of maintenance plans
- Program to establish best practice mechanisms for rural roads maintenance at the community level
- Dedicated technical assistance program developed to assist participating states

The operation would be supported by a technical assistance project designed to (i) help lagging states move faster; (ii) provide capacity building on all aspects of rural road construction and management through training programs delivered by national training institutions and exposure to best international practices; and (iii) support improved maintenance practice, including independent assessment that States meet their maintenance requirements. An institutional assessment of the program would be carried out to better design the technical assistance project.
4. **Safeguard policies that might apply**
The project will involve such civil works as construction and upgrading of rural roads. Some roads required to connect very remote villages may traverse through forests or other protected or ecologically sensitive areas leading to higher risk of negative impact. The states have a number of cultural property sites, including (i) sites of archaeological (prehistoric and Neolithic), historical, and unique natural values; (ii) religious properties and sacred groves, where the roads may be passing. Social assessments conducted to date show very limited adverse impacts on people largely restricted to the modest loss of land from the widening of existing tracks. Land acquisition is not financed under the PMGSY program and undertaken largely through voluntary donations and, thus, no land acquisition is anticipated under the proposed project.

The safeguards policies that might apply include (i) OP 4.01: Environmental Assessment, (ii) OP 4.04: Natural Habitats; (iii) OP 4.36: Forests; (iv) OP 4.11: Physical Cultural Resources; (v) OP 4.10: Indigenous Peoples; (vi) OP 4.12: Involuntary Resettlement. The Team will continue its work to determine if OP 7.60: Projects in Disputed Areas will be triggered or not.

5. **Tentative financing**

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<td><strong>Total</strong></td>
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6. **Contact point**
Contact: Simon David Ellis
Title: Senior Transport Economist
Tel: (202) 458-5497
Fax: 
Email: sellis1@worldbank.org