

## Government of India and World Bank signs \$500 Million Additional Financing for Pradhan Mantri Gram Sadak Yojana Rural Roads Project

The Government of India and the World Bank signed a \$500 million loan agreement to provide additional financing for the Pradhan Mantri Gram Sadak Yojana (PMGSY) Rural Roads Project, implemented by Ministry of Rural Development, Government of India, which will build 7,000 km of climate resilient roads, out of which 3,500 km will be constructed using green technologies.

The World Bank has supported PMGSY since its inception in 2004. So far it has invested over \$1.8 billion in loans and credits mostly in the economically weaker and hill states across North India - Bihar, Himachal Pradesh, Jharkhand, Meghalaya, Rajasthan, Uttarakhand, and Uttar Pradesh. It has built and improved about 35,000 km of rural roads and benefited about eight million people with access to all-weather roads.

Adequate maintenance of the existing 4.6 million km of road network is emerging as a major challenge. Many parts of the existing road network are either vulnerable to or have already suffered damage from climate induced events such as floods, high rainfall, sudden cloud bursts and land-slides.

To support the rural economy and communities and households that depend on rural livelihoods, it will be critical to ensure that infrastructure is built and maintained to withstand climatic changes. This project will demonstrate how climate resilient construction can be integrated in the strategy and planning of rural roads.

The PMGSY and the Bank's involvement under this additional financing, will emphasize on managing the rural road network through green and climate-resilient construction using green, low-carbon designs and new technologies – far beyond merely funding civil works. This will be done through the following measures:

- Climate vulnerability assessment during the design process to identify the critical locations affected by floods, water-logging, submergence, cloud bursts, storms, landslides, poor drainage, excessive erosion, high rainfall, and high temperatures.
- Special treatment for flood-affected areas through adequate waterways and submersible roads to allow easy passage of water, use of concrete block pavements, and improved drainage;
- Use of environmentally optimized road designs and new technologies which uses local and marginal materials and industrial by-products such as sand, local soils, fly ash, brick kiln wastes, and other similar materials in place of crushed rocks;
- Innovative bridges and culverts through use of pre-fabricated/pre-cast units for roads and bridges having better ability to withstand earthquakes and water forces such as continuous beams, bearing free construction, and river training works;
- Use of hill cutting material in hill roads ensuring its productive use and resolving its disposal problem, use of bio-engineering measures, improved drainage and other treatments for landslide prone areas and providing adequate slope protection.

The Additional Financing will also fill the gender gap by creating employment opportunities for women in construction and maintenance. The earlier project had piloted community-based maintenance contracts through women self-help groups (SHGs) for routine maintenance of 200 km of PMGSY roads in Uttarakhand, Meghalaya and Himachal Pradesh. SHG-run maintenance contracts will now be extended to about 500 km

roads over 5 states.

All components of the project will have substantial climate co-benefits and help road agencies in India to substantially minimize GHG emissions. Improving road conditions alone will result on an average in direct savings of 2.68 million tons annually in GHG emissions and minimize the annual losses of about \$9 billion in the road asset value and an equal amount by way of high vehicle operating costs.

The \$500 million loan, from the International Bank for Reconstruction and Development (IBRD), has a 3-year grace period, and a maturity of 10 years.

Please contact for any query related to this mail to Ms. Abha Chauhan, Research Associate at [abha.chauhan@phdcci.in](mailto:abha.chauhan@phdcci.in) with a cc to Dr. S P Sharma, Chief Economist at [spsharma@phdcci.in](mailto:spsharma@phdcci.in) and Ms. Megha Kaul, Associate Economist, [megha@phdcci.in](mailto:megha@phdcci.in), PHD Chamber of Commerce & Industry.

Warm regards,

Dr. S P Sharma  
Chief Economist

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PHD Chamber of Commerce and Industry  
PHD House, 4/2 Siri Institutional Area  
August Kranti Marg, New Delhi-110016  
Ph.: + 91-11-26863801-04, 49545454  
Fax: +91- 26855450, 49545451  
Email: [spsharma@phdcci.in](mailto:spsharma@phdcci.in)  
Website: [www.phdcci.in](http://www.phdcci.in)

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PHD House, 4/2 Siri Institutional Area, August Kranti Marg, New Delhi - 110 016 (India) • Tel. : +91-11-2686 3801-04, 49545454, 49545400  
Fax : +91-11-2685 5450 • E-mail : [research@phdcci.in](mailto:research@phdcci.in) • Website : [www.phdcci.in](http://www.phdcci.in), CIN: U74899DL1951GAP001947





