

**INDIA: Himachal Pradesh State Roads Project [Ln. 4860-IN]
Implementation Support Mission (May 14 to 22, 2013)
Aide-Memoire**

EXECUTIVE SUMMARY

1. A World Bank mission visited Himachal Pradesh during May 14 to 22, 2013, to support the Government of Himachal Pradesh (GoHP) in implementation of the Himachal Pradesh State Roads Project (HPSRP). The achievement of Project Development Objective is rated *Moderately Satisfactory* and Implementation Progress rating has been upgraded to *Moderately Satisfactory*.
2. All covenants are in compliance. HPRIDC have largely complied with the action plan, which was agreed during the previous missions to improve the performance of the project. The project continues to utilize the relatively large amount of advance made to the GoI last year; thus disbursement from the project account remains at US\$149.7 million [68% of original Loan /53% of the total Loan] since the last mission in January / February 2013,. However project expenditures have increased by about US\$14 million. Environmental safeguards, social safeguards, and financial management have been rated *Satisfactory*. Project management and Procurement rating has been retained as *Moderately Satisfactory*.
3. **Component 1** (Core Network Upgrading) of the project envisages upgrading of 447¹ km of roads in the Core Road Network (CRN). Himachal Pradesh Roads and other Infrastructure Development Corporation (HPRIDC) are implementing this component through 10 contract packages in two phases. Reasonably good progress has been observed across all the upgrading packages. The overall physical progress as of end December 2012 is 58%²- a 4% increase since the last mission. The project has made a marked progress in land acquisition and forest clearances. About 275 km of roads have been laid with Dense Bituminous Macadam or Bituminous Concrete/Semi Dense Bituminous concrete. In Phase 1 upgrading works, the contracts are at various stages of physical progress ranging from 24% to 100%. In phase 2, the physical progress ranges from 5.5% to 100%. Packages 2, 7 and 10 have substantially been completed and taken over by HPRIDC.
4. Packages 5 and 6 were terminated in July and October 2012 respectively. The two packages have been split into four packages and tendered in May 2013 with bids expected to be received during June and July 2013. All the four packages are expected to be awarded by August 2013. PWD has mobilized its force account maintenance brigade and resources and kept the key commercial corridor of package 5 in a trafficable condition so far. The department is also finalizing a contract with a local contractor to continue the maintenance until the new contractor for upgrading works takes over the package. The slow progress observed in the last mission package 1 has now picked up albeit limited to pavement works. The structural works remains largely unattended and the contractor did neither assign resource nor has a plan to undertake the bridge works. HPRIDC needs to hold discussions with the Contractor and the Engineer to come up with a proposal for completing the structural works on this package. Considerable progress has been made in all the packages under Phase I and II. Most of the roads under Phase I and Phase II are available 100% hindrance/encumbrance free.
5. **Component 2** (Core Network Maintenance and Management) of the project envisages: (a) periodic maintenance and minor rehabilitation of about 2,000 km of the Core Road Network (CRN); (b) piloting performance-based maintenance contracts; (c) accident black spot improvements; (d) pre-investment studies for road network improvement and maintenance; and (e) capacity enhancement in road maintenance, financing, and management. Periodic maintenance of 1280 km of roads in CRN has been

¹ Total component length reduced to 434.9 km owing to change in designs during implementation.

² The last mission cumulative progress was 54% but was inadvertently over reported by 2%

completed; works in about 95 km of roads is in progress. Accordingly, Tranche 1 works have been completed and works under Tranche 2 has been substantially completed except for minor bio-engineering works on about 3.5 km. Contracts for works for another 88 km are to be procured. Tenders for one package of Long Term Performance Based Maintenance Contract (LTPBMC) of 53 km out of a selected 424 km have been invited. It is expected that the remaining 371 km of LTPBMC will be procured in the next 6-9 months. Tenders for two out of nine packages of blackspot improvement on critical corridors have been launched; the balance will be done in June. The overall implementation progress of the project has been upgraded to *Moderately Satisfactory*.

6. Status of Key Agreed Actions from the Last mission

| S. No | Action | Status |
|-------|--|---|
| i. | HPRIDC will invite the bids for package 5 and 6 by March 31, 2013; arrange for maintenance of the abandoned road sections until new contractors take over; | Bids were invited, maintenance is arranged |
| ii. | HPRIDC will monitor progress of package 1 until May 30, 2013 and take contractual remedies based on legal advice, should performance continue to be poor; | Contract resumed and picked up progress, but needs to expand operation to include bridges |
| iii. | HPRIDC will invite the bids for performance-based maintenance contracts – by March 31, 2013; and | 53 km tendered, balance work is ongoing |
| iv. | HPRIDC invite proposals for the establishment and implementation of Road Accident Data Management System by March 15, 2013. | RFP issued |

7. Status of Key Agreed Actions from the Current mission

| S. No | Action |
|-------|--|
| i. | HPRIDC with the Contractor and Engineer will work out a plan package-1 for tackling the structural work and share to the Bank by June 30, 2013 |
| ii. | HPRIDC awards the contracts for package 5 and 6 by September 30, 2013 |
| iii. | The long stretch granular layer of package 9, should be covered at least by one bituminous layer before the next monsoon |
| iv. | HPRIDC awards the bids for the balance performance-based maintenance contracts – by September 15, 2013 |
| v. | HPRIDC issues tenders for the balance of black-spots improvement works by June 7, 2013 |
| vi. | Rectification works, site clean-up, water way clearing works to be completed for all contracts within the DLP works before final taking over |
| vii. | Perform road safety audits on all roads, identify critical gaps to be addressed before the next mission |
| viii. | Launch tenders for pilot bio-engineering works for package 7 and 10, before July 31, 2013 |

8. The World Bank management approved an additional loan of \$61.7 million with a Closing Date of June 30, 2016, and extension of the Closing Date of the original Loan to coincide with that of the additional Loan. The Bank has notified GoI about the extension of the Original Loan Closing Date and has also formally recorded it in the system.

9. The following sections of this Aide Memoire present the findings of the mission in detail.

I. INTRODUCTION

1. A World Bank mission³ visited Himachal Pradesh during May 14 to 22, 2013 to support the Government of Himachal Pradesh (GoHP) in implementation of the Himachal Pradesh State Roads Project (HPSRP). The mission visited a number of project sites and held extensive discussions with officials and engineers from the Public Works Department (PWD) and the Himachal Pradesh Roads and other Infrastructure Development Corporation (HPRIDC). The mission wishes to thank them for their hospitality and collaboration.

2. This Aide-Memoire (AM) summarizes the findings, recommendations, and agreements reached during the mission. It includes 14 Annexes (including status of actions agreed during previous mission in **Annex 3** and a list of agreed actions in **Annex 4**). The main findings and actions to be taken, an update of actions agreed during the last mission, were all discussed with PWD and HPRIDC at a wrap-up meeting in Shimla on May 21, 2013.

II. KEY PROJECT DATA & PERFORMANCE RATING

| Key Project Data | Project Performance since the last mission |
|---|--|
| Total Project Cost (PAD): US\$ 401 million | Project Development Objective: MS |
| Loan Amount: -Original Loan: US\$220 million -Additional Loan: US\$61.7 million | Implementation Progress: MS |
| Bank Board Approval Date: -Original Loan :June 5, 2007 -Additional Loan: October 25, 2012 | Project Management: MS |
| Effectiveness Date: -Original Loan: October 5, 2007 -Additional Loan: April 2, 2013 | Procurement: MS |
| Loan Closing Date: June 30, 2016 | Financial Management: S |
| Project Age: 71 months | Environmental Safeguards: S |
| Loan Disbursed: 53% (US\$ 149 million) | Social Safeguards: S |
| Loan Committed: 100% | Flags: Nil |

Ratings: **HS**=Highly Satisfactory; **S**=Satisfactory; **MS**=Moderately Satisfactory; **MU**=Moderately Unsatisfactory; **U**=Unsatisfactory; **HU**=Highly Unsatisfactory

3. **Project Development Objective (PDO).** The development objective of the Project is to reduce transport costs and to improve traffic flows on priority segments of the core road network of Himachal Pradesh. This objective is to be achieved through a package of prioritized infrastructure investments and improved management practices. The indicators to measure performance in achieving the development objective are: (i) condition of the core network; (ii) speeds on the project upgrading roads; (iii) fatal accident rate on the state highways; and (iv) the level of road user satisfaction on the core network. The mission together with the GoHP reassessed the Project Development Objective (PDO) and concluded that the PDO remain valid and it is likely to be substantially achieved by the end of the project. The progress in achieving these performance indicators is presented at **Annex 1**.

4. Progress in achieving the PDO is maintained **Moderately Satisfactory**, based on the progress of performance indicators agreed at appraisal. Two of the indicators [i.e., fatal accident rate on the state highways, and level of road user satisfaction] have progressed well and achieving the PDO by the end of project is possible. The third indicator- condition of Core Network has been positively progressing

³ The mission comprised of Mesfin W. Jijo (Task Team Leader and Sr. Transport Specialist), Neha Vyas (Environment Specialist), Arun Kolsur (Sr. Procurement Specialist), Rohit Gawri (IT Analyst), A. K. Swaminathan (Highway Engineer – Consultants), Venkata Rao Bayana (Social Development Specialist - Consultant), Tripti Jain (Financial Management Analyst), R. Thiagarajan (Consultant – Road Safety and Maintenance Consulstant), N. S. Srinivas (Operations Analyst) and Payal Malik Madan (Procurement Assistant).

smoothly in the past, but showed a slight drop due to the inclusion of some poor condition road segments to the CRN, and reclassification of some good condition state roads into the national highway network .

| Outcome Indicators | Baseline | Target Value by Mid-term | Target Value by completion | Value/Status of performance indicator |
|--|----------|-----------------------------|-----------------------------|---|
| % of the entire core network (~4,000 km) in poor condition | 40% | 30% | =< 10% | 33%* |
| Average speeds on the WB financed roads, which received upgrading, predicted using HDM-4, (% increase) | 25 kmph | 25% for completed stretches | 25% for completed stretches | 45% of road stretches have been completed. However, on 274 km of roads [about 63%] on which Dense Bituminous Macadam layer has been laid, speeds have increased by more than 25%. |
| Death rate on HP state highways (number of deaths involved in traffic accidents/1,000 veh) | 2.0 | =<2.0 | =<2.0 | 0.32 |
| Level of road user satisfaction with the entire core network, index 1-5 | 1.5 | 2.0 | 3.0 | 3.9 |

*This indicator showed a decline due to the inclusion of poor condition road segments to the CRN and reclassification of some good condition state roads into National Highways.

Implementation Progress: The Project consists of two components. The overall Implementation Progress is rated as **Moderately Satisfactory**. The Core Network Improvement Component has been upgraded to **Moderately Satisfactory** because of sufficient progress over the past 3 months in the re-bidding process in packages 5 and 6 where the tenders have been invited and there is a strong likelihood that the contracts will be awarded and works commenced in the next 6 months to enable their completion before the close of the Loan in mid-2016. However, the Bank team cautioned the HPRIDC that the rating would be downgraded in the next mission if the contracts are not awarded and works commenced as expected. There has been reasonable progress in other contracts 3, 4 and 8 in terms of quantity of works as well as a good improvement in quality aspects also and likely to be completed substantially in the next 6-12 months Packages 2, 7 and 10 have been completed and are in the Defects Liability Period. Package 1 needs close monitoring and timely action so as to enable implementing the bridges that the current contractor does not intend to take up. The contractor for package 9 also needs to reorient its plan to complete pavement works in tandem, and pay attention to slope protection and site clearance works.

The Core Network Maintenance and Management component has also currently been rated **Moderately Satisfactory** due to the progress made in inviting the first package of LTPBMC as well as Road Accident Data Management System and the good progress in the other ongoing conventional maintenance contracts. Again, the Bank team wishes to caution that this rating could also get downgraded if the remaining 4 contracts for conventional maintenance as well as the Performance-based maintenance are not awarded in the next 6 months.

5. The progress of implementation of these components is as follows.

Core Network Improvement Component (Moderately Satisfactory): In this component, 10 upgrading roads in two phases were originally being implemented. The five contract packages (Packages 1-5) of Phase 1 upgrading works are at various stages with physical progress ranging from 24% to 100%. All packages except for packages 1 and 5 have progressed reasonably well. Contract Package 5 was terminated in July 2012. Compensation for land has been disbursed in all the 217 villages. Considerable progress made in removal of encumbrances. In phase 1, 4 packages are 100% hindrance-free while in the remaining package (i.e. package 4) the road stretches are about 98% hindrance-free. Out of a total of 232 km, about 148 km of roads have been blacktopped i.e. laid with Dense Bituminous Macadam or

Bituminous Concrete / Semi Dense Bituminous Concrete. The big shortfall here is due to the termination of package 5 which is 81 km long and only 7.5 km of black-topping was done. Following the termination of package 5 it was split in two packages of ICB and NCB and tendered in May 2013.

Of the five upgrading packages (packages 6-10) of Phase 2, works are progressing in four packages. Here too due to the poor performance of the contractor in Package 6 the contract has been terminated in October 2012. In all these packages, the civil works are at various stages with physical progress ranging from 5.5% to 100%. Package 6 is reportedly 90% hindrance-free while all other packages are 100% hindrance-free. Out of a total of 203 km, about 127 km of roads have been blacktopped i.e. laid with Dense Bituminous Macadam or Bituminous Concrete / Semi Dense Bituminous Concrete. Here too, the big shortfall is due to the termination of package 6 which is 42 km long and no black-topping was done. Following the termination of package 6 it was split in two packages of ICB and NCB and tendered in May 2013.

Core Network Maintenance and Management (Moderately Satisfactory): This component includes: (a) periodic maintenance and minor rehabilitation of about 2,000 km of Core Road Network (CRN); (b) piloting performance-based maintenance contracts; (c) accident black spot improvements; (d) pre-investment studies for road network improvement and maintenance; and (e) capacity enhancement in road maintenance, financing, and management. Periodic maintenance of 1280 km of roads in CRN have been completed, works in about 95 km are ongoing and 4 packages for another 88 km are to be procured. Tenders for one package of Long-term Performance Based Maintenance Contract (LTPBMC) of 53 km out of a selected 424 km have been invited. It is expected that the remaining 371 km of LTPBMC will be procured in the next 6-9 months. Tranche 1 has been completed. Tranche 2 has been substantially completed except for some minor bio-engineering works on about 3.5 km completed. 231 km of works of Tranche 3 contracts have been completed, 95 km are ongoing and 4 contracts of about 88 km are yet to be awarded. Mission advised that if there are problems in response to bids for some contracts, time and again, the HPRIDC/PWD could think of substituting the roads by roads of equivalent condition, priority and length and bid them out. Mission advised that the PD cum CE of HPRIDC should along with HPRIDC representatives select the remaining roads for LTPBMC on the same lines as was done by HPRIDC for Hamirpur zone.

6. **Status of key actions agreed during the previous mission:** GoHP and HPHPRIDC have largely complied with the seven-point action plan, which was agreed during the previous mission to improve the performance of the project. The status of the action plan is given below:

| S. No | Action | Status |
|-------|--|---|
| i. | HPRIDC will invite the bids for package 5 and 6 by March 31, 2013; arrange for maintenance of the abandoned road sections until new contractors take over; | Bids were invited, maintenance is arranged |
| ii. | HPRIDC will monitor progress of package 1 until May 30, 2013 and take contractual remedies based on legal advice, should performance continue to be poor; | Contract resumed and picked up progress, but needs to expand operation to include bridges |
| iii. | HPRIDC will invite the bids for performance-based maintenance contracts – by March 31, 2013; and | 53 km tendered, balance work is ongoing |
| iv. | HPRIDC invite proposals for the establishment and implementation of Road Accident Data Management System by March 15, 2013. | RFP issued |

7. **Key actions agreed to improve project performance:** It is critical to take the following actions, which have been discussed with the Public Works Department (PWD) and HPRIDC during the mission,

to improve the performance of the project. Implementation of these steps would be required to improve the rating of the project to Satisfactory status:

| S. No | Action |
|-------|--|
| i. | HPRIDC with the Contractor and Engineer will work out a plan for package-1 for tackling the structural work and share to the Bank by June 30, 2013 |
| ii. | HPRIDC awards the contracts for package 5 and 6 by September 30, 2013 |
| iii. | The long stretch granular layer of package 9, should be covered at least by one bituminous layer before the next monsoon |
| iv. | HPRIDC awards the bids for the balance performance-based maintenance contracts – by September 15, 2013 |
| v. | HPRIDC issues tenders for the balance of black-spots improvement works by June 7, 2013 |
| vi. | Rectification works, site clean-up, water way clearing works to be completed for all contracts within the DLP works before final taking over |
| vii. | Perform road safety audits on all roads, identify critical gaps to be addressed before the next mission |
| viii. | Launch tenders for pilot bio-engineering works for package 7 and 10, before July 31, 2013 |

III. SUMMARY

Project Costs, Expenditure and Budget

8. The estimated total project cost has increased as displayed in the table below, due to increased costs in civil works:

9. Expenditure as of April 30, 2013 was Rs 982.84 Crore. The expenditure made and projected expenditure is presented below.

| Unit: Rs. in Crore | Estimated Cost at Appraisal (US\$) | Expenditure up to April 30, 2013 | Anticipated Expenditure (for next 6 months) | Total likely Expenditure up to October, 2013 |
|---|------------------------------------|----------------------------------|---|--|
| Upgrading Works | 211.18 | 625.92 | 90 | 715.92 |
| Utility Shifting | 1.73 | 6.81 | 2 | 8.81 |
| Compensatory Afforestation | 0.86 | 10.91 | 0.50 | 11.41 |
| Periodic Maintenance Works | | 146.98 | 15 | 161.98 |
| Maintenance Works, Consultancy Services and Trainings | 75.09 | 43.24 | 5 | 48.24 |
| Land acquisition | 12.42 | 143.32 | 35 | 178.32 |
| R&R | 2.14 | 5.00 | 2.5 | 7.5 |
| Incremental cost | | 0.66 | 0 | 0.66 |
| TOTAL | | 982.84 | 150 | 1132.84 |

Upgrading Works

10. The mission also visited most project sites where works are ongoing in Phases 1 and 2. Detailed mission observations and discussions are provided in **Annex 6**. For detailed status of all upgrading works,

please refer **Annex 11** and for status of encumbrances in upgrading roads, please refer **Annex 14**. During the site visits, it was observed that though there is some improvement in the quality of works there is ample scope to improve in the unfinished sections in terms of (i) structural finishing of concrete works in retaining structures, drains, CD/bridge works; (ii) providing functional weep-holes by proper placement, clearing the clogs and backfilling by appropriate filter material/geo-fabrics; (iii) debris clearance from sides of drains, proper dumping of debris at identified dump sites with flattening and benching; (iv) clearing of access roads to public on the valley/hillsides; (v) in some packages the clearance of material from landslides should be expedited to prevent traffic hazards. All uncovered layers of WMM and DBM should be covered by the upper layers, and drainage works cleaned and completed along with protection works before the expected monsoons in June 2013. The mission reiterates the need to carry out a road safety audit in all ongoing packages and take appropriate measures in critical locations. The table below provides the current status of the Phase I and II works in terms of actual pavement work done.

| Packages | Length (km) | Sub-base (km) | WMM (km) | DBM (km) | Wearing Coat (km) |
|------------|-------------|---------------|----------|----------|-------------------|
| Phase – 1 | 231.8 | 163.9 | 158.9 | 147.8 | 100.8 |
| Phase – 2 | 203.1 | 155.1 | 139.1 | 126.3 | 108.3 |
| Total | 434.9 | 319.0 | 298.0 | 274.1 | 209.1 |
| Proportion | - | 73% | 69% | 63% | 48% |

11. The packages 7 & 10 were the first to be completed and taken over and the DLP is ongoing. However, the supervision consultant and the HPRIDC officers opine that the contractor was not reacting in the first 6 months of DLP and has only now turned up and working in to correct defects and do any remaining works expected of it. Recently package 2 has also been completed and the defects liability period is on since December 2012 for the last milestone. The CSC and HPRIDC should now ensure that all remaining items of works and other rectifications should be attended to by the contractor to the satisfaction of the Employer before the close of the DLP. It is expected that the Packages 3, 4 and 8 will be substantially completed within the next 3-9 months and taken over – package 3 by August 2013, package 4 by July 2013 (except for the difficult landslide areas and the re-alignment portion of 1.2 km) and package 8 by March 2014.

12. Though there has been more than 7% progress reported on package 9, the progress of various works is not moving in tandem thereby long stretches of GSB and WMM layers have been constructed without necessarily be covered with bituminous layer, rendering itself to quick deterioration by traffic and environmental factors. The granular layers should be corrected and covered with DBM. It was further agreed that a revised plan of action will be prepared and agreed between HPRIDC, CSC and the Contractor by end-May 2013 to enable the contract to be completed within the revised Loan closing date. The contractor on package 4 has slipped behind schedule but is also likely to complete all works by next year if land is fully made available encumbrance-free in the 1.2 km of re-alignment stretch. Land acquisition for this 1.2 km of re-alignment in package 4 will need to be completed as soon as possible by the PWD and Revenue Department.

13. The package 1 is performing poorly for the past two year and more. After the last mission, the contractor has completed about 6 km of DBM in difficult DBM stretches and expects to complete all DBM works by June 2013 and commence the wearing coat works by July 2013. It was agreed during the mission that the contractor would submit to the CSC, resource based contract implementation plan which will be reviewed by the CSC and the HPRIDC for realism and intent of the contractor. This plan should clearly detail the steps to be taken for completing the structural works which are lagging much behind schedule. Failing which it was decided that appropriate contractual remedies would be taken by CSC and HPRIDC. Contract packages 5 and 6 have been terminated. These packages have been sub-divided into two smaller packages each and bids have been now invited. It is expected that these contract will now be awarded in the next 3-4 months.

14. **Construction Supervision.** During discussions at site and in Shimla, the construction supervision consultants (CSC) mentioned that since the previous mission there has been a good improvement in deciding long pending issues of the contract and payments. The contract has been extended till June 2013 while a lot of pending payments cleared. However, the CSC needs to continue working till the works finish which would take at least another 2 years and hence an extension needs to be given to their service contract before the close of the current contract. There may be still some pending issues of payments and scope of services which need to be resolved amicably by the HPRIDC and the CSC.

15. Mission however pointed out to the consultant that some quality defects were still observed by the mission at site and was surprised that these have been overlooked by the CSC despite concerns expressed by previous Bank missions. The CSC team would need to ensure that the teams at site follow a QA/QC system of new works and rectification of defective construction in a timely manner and *not wait for bank mission* to point them out. There is a need for (i) thorough quality check of DBM, drainage and protection works, and finishing of structural works in all packages, (ii) timely preparation of revised cost estimates and variation orders for the changes in scope/specifications of works and submit them along with detailed justification for approval of HPRIDC, (iii) carry out a road safety audit on all packages to ascertain adequate measures have been built in the designs, and advise HPRIDC to enhance the measures that need to be implemented in critical locations and to be completed before August 2013; and (iv) put in more effort to prepare better monthly project reports which currently are sub-standard with lots of gaps and discrepancies.

Environmental Management

16. The focus of the mission was to review the over-all adequacy and quality of EMP implementation in the upgrading works under Phase I and II of the project. For this, the mission visited three out of the five contracts under Phase I and four out of the five contracts under Phase II. Out of the three packages (2, 5 and 6) which the mission did not visit, there are no activities that are under execution on contracts 5 and 6 as the works have been terminated. Apart from the site visits, the mission had detailed discussions with Contractors, Construction Supervision Consultant and officials from HPRIDC and CMUs on various environment management related activities.

17. The mission specifically reviewed in detail various activities on contracts 2, 3, 7 and 10 pertaining to closure of works and had extensive discussions on the proposed Bio-engineering Works Contract. Additionally, the mission reviewed the following: (a) progress on pre-construction activities such as tree cutting and relocation of water sources; (b) advancement on outstanding forest land diversion case/s that were identified during the earlier missions; (c) status and progress on bio-engineering works; (d) status of plantation/bio-engineering works on roads under the periodic maintenance component; (e) institutional arrangements for environment management activities under the project; (f) compensatory afforestation and; (g) disclosure of documents. Details are provided in **Annex 9**.

18. **Over-view:** On the whole, the implementation of Environment Management Plans (EMPs) was found to be 'satisfactory' despite the challenges posed by topographic and climatic conditions. Despite some initial gaps in EMP implementation, an over-all satisfactory progress with regard to environmental management has been observed.

19. The project has been able to address successfully and demonstrate good practices in dealing with key environmental issues faced during hill roads development. These include: (a) management and disposal of debris/spoils from hill cutting, including rehabilitation of such sites; (b) provision of protection measures (such as retaining walls and gabions) to avoid adverse impacts on private properties, forests, irrigation channels and water sources; (c) piloting of bio-engineering techniques for hill slope protection and the use of these techniques for stabilizing debris disposal sites; (d) protection of water sources/springs by adjustments in road alignment (such as in contracts 8, 2, 3 and 4); (e) restoration and

provision of pucca pathways and stairs to provide access to residences, schools, health centers, temples and to connect other access roads; (f) savings of trees (such as in contract 1, 3, 7 and 10 and; (g) an over-all satisfactory clean-up/rehabilitation of work sites. While some provisions were made in the design itself, diligence and small adjustments by CSC during the construction stage has enabled saving of more number of properties and assets.

20. Upgrading Works: While the over-all implementation of EMPs is rated 'satisfactory', there are a few actions/activities that need attention. These include:

- a) Complete the rehabilitation of debris disposal sites, including grading, plantation and bio-engineering works, provision of additional gabions and toe walls (on the road side where debris dumps are higher than road level) – the CSC must ensure that appropriate contractual remedies are applied well in time, to complete the rehabilitation works satisfactorily in line with EMP requirements before substantial completion certificate is issued and the section/milestone is taken-over. Immediate attention is required on Contracts 7, 8 and 10 where the DLP will be over in the near future.
- b) Ensure clearance of waterways before monsoon (at all culvert/bridge construction sites; debris disposal sites) and maintaining of appropriate grade to ease out water – also provide catch pits and other protection measures, as per site requirements to prevent scouring/erosion
- c) Complete the provision/construction of remaining protection works, longitudinal drainage, catch pits and access roads – attention is required on Contracts 2, 3, 7, 8 and 10.
- d) Complete clearance of earth/stones/scarified bitumen from worksites (along main carriageway, culverts, bridge construction sites and haul roads)
- e) Undertake plantation works (shrubs/broadcasting of grass seeds) along the retaining walls where loose earth dumps (from foundation works) exist
- f) Ensure proper work site safety management on all contracts in accordance with contractual requirements, including enforcing of PPE discipline at all worksites (stone breaking; bar bending; hill cutting; bridge construction sites)
- g) Provision of signage in areas with wildlife movement
- h) Provision of safety measures (in addition to signage) near schools, health centers and other critical locations after a contract package-wise assessment/audit is carried out – CSC needs to prepare and submit the proposal to this effect to the Employer for approval.
- i) Improve the finishing of bus-stops
- j) Any outstanding work, even if it is minor in nature, must be clearly listed in the 'punch list' by the CSC at the time of taking-over the road.

21. Regular participation of Environmental and Bio-engineering Officers in monthly/technical review meetings will help in improving the 'results' in a timely manner. Immediate attention is required, particularly on contracts where works and/or the DLP is nearing completion. It was agreed that HPRIDC, CMUs and the CSC will closely follow-up on the said issues and ensure their satisfactory completion. A few other contract-package wise observations that were noted during site visits and need to be followed-up have been listed separately in **Annex 9**.

22. Bio-engineering Works: Under the project, technical specifications for bio-engineering works and nursery manual have been prepared and trial sites have been established and extended to works under the periodic maintenance component.

23. Apart from this, bio-engineering plans/DPRs for up-grading works were prepared way back in 2010. Funding for such works is being provided as part of the Additional Financing to help GoHP upscale the 'pilots' that were introduced in the original/parent project. The draft Bidding Document for the first such work is currently under preparation. There were extensive discussions on the scope of work,

technical specifications, bill of quantities, drawings and other associated aspects such as rate analysis, payment modalities, pre-qualification criteria and maintenance requirements.

24. The mission recommended that an Operations Manual should be prepared to maintain clarity on the preparation, execution and maintenance aspects of these works. The mission also recommended that once the draft is prepared, a joint review meeting should be organized, involving officials from HPRIDC (Project Director, Procurement Expert, Nodal Environment Officer, Nodal Bio-engineering Officer); active officials from CMUs, other divisions of PWD, Soil Conservation and Forest Department.

25. It was agreed that the first contract for bio-engineering works will be prepared for the two upgrading roads, namely Ranital-Kotla and Bhawarna-Lambagaon (Contracts 7 and 10). The draft Bidding Document will be shared for Bank's review by June 30, 2013. The second contract would possibly cover upgrading roads under Contracts 1, 2 and 3. Since this is the first such initiative, the draft bidding document for this contract will undergo a prior review. The Procurement Specialist from Bank reminded HPRIDC to include these proposed works in the Procurement Plan for the project.

26. Institutional Arrangements for Environment Management: Environment and Safety officers (ESO) in the contractor's team are in place in all Contracts where civil works are in progress (not required in Contracts 7 and 10, where works are over and doesn't apply to Contracts 5 and 6, which stand terminated). However, deployment of qualified Environment and Safety Officers in the Contractor's team with proper resource support is required in case of Contracts 8 and 9, where these positions have remained vacant for a long time - immediate deployment is necessary and it was agreed that CSC will apply appropriate contractual remedies, in case the positions are not filled-in.

27. The deployment of full time Environment Officer (EO) within the CSC's team, an issue that had been pending for a long time has been finally addressed by HPRIDC. The mission appreciated the role of the Project Director, HPRIDC in addressing this outstanding issue. One full time Environment Officer is currently in position and is actively participating in site inspections for improving the over-all environmental performance of the project. Likewise, one full time junior Bio-engineering Specialist, with substantial years of field experience and one Senior Bio-engineering Specialist are in place now as part of the CSC's team set-up. This deployment was essential for HPRIDC to be able to update the Bio-engineering DPRs (prepared in-house way back in 2010) and have them ready for bidding in the next month or two.

28. **Key Agreed Actions:** The key activities/actions that require attention, in addition to those mentioned above, include the following:

- a) Complete contract-package wise actions/activities listed in the annex.
- b) Obtain Forest Clearance for Contract 6 (identified last year) by September 30, 2013.
- c) HPRIDC/CMU to take necessary actions to prevent de-facing of bus-stops.
- d) Undertake assessment for the realigned section (1.3 km) in Contract 4 by June 30, 2013
- e) Complete plantation/bio-engineering works on all remaining periodic maintenance roads during the coming monsoon (except those works which are yet to be procured) by September 30, 2013.
- f) Undertake fresh plantation in cases where very poor/poor survival rates have been recorded by September 30, 2013.
- g) Share the draft Bidding Document for the Bio-engineering Works Contract covering upgrading works on contracts 7 and 10 for Bank's review by June 30, 2013.

Social Safeguards

29. The overall implementation progress on social safeguards is Satisfactory. Land acquisition is complete in all packages except for Package 6 and for the newly proposed 1.2 kms bypass in Package 4. The mission was pleased to note that (1) safety measures at schools and hospitals has been initiated (2)

the training activities for the PAPs has been complete for about 30% of eligible PAPs; (2) assessment of number of structures saved and other data cleaning on base information such as total displaced, etc. has been substantially completed (see **Annex 8**). Critical issues to address are.

- a) Land acquisition has to make progress in Package 6. Of the total 37 villages in package 6, disbursement of compensation was done in only 4 villages and award declaration was complete in 14 villages. It is agreed that land acquisition will be completed in Package 6 before end September 2013.
- b) Land plan schedules for proposed 1.2 kms in Package 4 will be completed before end May 2013 and land acquisition will be completed before end August 2013. (c) Few of the notified structures proposed for acquisition under Section 4 (1) were finally avoided through design changes. It has been agreed that the HPRIDC would complete assessment of structures/plots eligible for de-notification and initiate legal process for de-notification before end June 2013.
- c) Disbursement of assistance amount will be completed before end August 2013.
- d) Providing customized safety provisions at school and hospital points will be completed before end August 2013.
- e) In view of the ongoing land acquisition in Package 6 and the R&R activities to be undertaken, HPRIDC will review and extend the NGO services before end June 2013.
- f) Training programs have been in progress and agreed to complete all programs before end June 2013.

Periodic Maintenance Works

30. The Project includes periodic maintenance and long term performance-based contracts of about 2000 km of roads in CRN [Core Road Network] of the State. The works have been taken up in three tranches. Periodic maintenance of 1280 km of roads in CRN has been completed except for some bio-engineering works. Contracts for works for another 95 km are ongoing while contracts for 88 km of roads are to be tendered out. Tranches 1 and 2 works have been completed. Of the 20 proposed roads of 414 km in Tranche-3, 12 roads totaling to 231 km have been completed. Contracts for works on 4 contracts for 95 km are ongoing while another 4 contracts for 88km have yet to be procured. For status of all periodic maintenance works, please refer **Annexes 7 and 12**. Mission advised the HPRIDC that most of the maintenance contracts are below the prior review threshold of the Bank and therefore need not be sent to Bank for No-Objection or approval. Only cases where roads are being substituted or deleted prior approval of the Bank with proper justification needs to be taken.

31. On proposed LTPBMC stretches, mission advised that the departmental maintenance - routine as well as periodic – should continue till the contracts for LTPBMC are awarded and mobilized. Otherwise, there is a possibility of deterioration of road beyond the contractors' initial estimate of road condition. Though one package in Hamirpur zone of Performance Based Maintenance contracts have been invited the mission is a bit disappointed that there are problems in the selection of the remaining roads for LTPBMC and urged the HPRIDC and PWD to expedite the selection and preparation of DPR/bidding documents in the next 3 months so as to invite the tenders before the next mission.

32. **Design of Road Safety/Blackspots Improvement Program.** The mission was informed that the total number of blackspots have been clubbed together thereby resulting in reduction in the total number of blackspots. In view of this the total number of blackspots identified now stands at ten. Out of the final ten identified for development of mitigation measures, one of the blackspots identified (NH-88) has been dropped as this stretch is being taken up by NHAI for undertaking maintenance works. The mission was however concerned to note that the bidding documents, despite being ready, is yet to be issued. The mission emphasized on the importance and criticality of this activity and urged that the bidding documents should be issued on priority without any further delay. It was agreed with HPRIDC that the

bidding documents should be issued latest by the first week of June 2013. The following table presents the fatal accident scenario on HP state highways.

| Year | Total number of registered vehicles [as on March of the year] | Number of fatalities due to road accidents on state highways during the year [from 1 st July of previous year to 30 June of year] | Death rate on HP state highways (number of deaths involved in traffic accidents/1,000 vehicles) |
|------|---|--|---|
| 2009 | 522,983 | 281 | 0.54 |
| 2010 | 583,673 | 286 | 0.49 |
| 2011 | 621,714 | 322 | 0.52 |
| 2012 | 766,959 | 244* | 0.32 |

* up to December 2012 only.
Being Collected

Road Sector Management

33. **Road Maintenance Fund.** During the last mission in January 2013, HPRIDC had informed that a legislative process was underway for enactment of a Road Fund Bill and discussions between the PWD and Finance Department were in advanced stages. However, no progress has been made since then. The mission was informed that the process has been temporarily stalled owing to change in the state government and that the process will have to be initiated all over again.

| Year-wise Details of Funds Available/Expenditure incurred for Repair & Maintenance /Salary (Rs. in Crore) | | | | | | | | | | | |
|---|---|--|-----------|---|----------|---------|-------------------------|-------------------|---------------|---|--|
| Year | Amount for Maintenance of Roads as per Finance Commission Norms | Additional Grant-in-Aid for Maintenance of Roads as per Finance Commission Norms | Total | Total Expenditure for Maintenance of Roads including Salary | | | Work Charged Gang Labor | Daily Waged Labor | HP PWD Salary | Total Expenditure for Maintenance of Roads excluding Salary | % of maintenance expenditure w.r.t. Finance Commission norms |
| | | | | Plan | Non Plan | Total | | | | | |
| 1 | 2 | 3 | 4=(2)+(3) | 5 | | | 6 | 7 | 8 | 9 = (5)-(6)-(7)-(8) | 10 = [(9)/(4)]*100 |
| 2006-07 | 307.39 | 65.41 | 372.8 | 3.1 | 478.18 | 481.28 | 253.31 | - | 75.25 | 152.72 | 41 |
| 2007-08 | 322.76 | 65.41 | 388.17 | 5.09 | 671.97 | 677.06 | 417.19 | - | 90.89 | 168.98 | 43.5 |
| 2008-09 | 338.89 | 65.41 | 404.3 | 0 | 685.58 | 685.58 | 394.2 | - | 90.2 | 201.18 | 49.8 |
| 2009-10 | 355.84 | 65.41 | 421.25 | 132.22 | 756.31 | 888.53 | 456.74 | - | 106.84 | 324.95 | 77.1 |
| 2010-11 | 373.63 | 65.41 | 439.04 | 108.02 | 957.53 | 1065.55 | 559.24 | - | 132.99 | 373.32 | 85 |
| 2011-12 | 392.314 | 89.33 | 481.64 | 50.05 | 1157.45 | 1207.5 | 692.13 | 20.68 | 170.06 | 345.31 | 67.4 |
| 2012-13* | 411.93 | 102.36 | 514.29 | 38.41 | 1147.22 | 1185.63 | 615.11 | 47.36 | 169.38 | 353.78 | 68.8 |
| 2012-13 (upto 31-12-2013) | | 36.22 | | 16.39 | 727.96 | 744.35 | 399.15 | 14.24 | 102.8 | 211.77 | |

*budget

34. **ICT Component.** The objective of the mission is to access the project IT infrastructure, help the project ICT team to write the Terms of Reference (TOR) for Program Management Consultant (PMC) and to discuss and resolve the issues related to procurement of PMC for on-line application.

35. HP PWD department has a very ambitious e-Governance program and would like to develop an ERP solution (proposed application name - HIM Lok-Nirman). Funding for designing, developing and rolling out the ERP application will partially come from the project.

36. In Year 2011, project IT team had hired NICSY to prepare “As-Is” and “To-be” report for proposed on-line application. Study was completed initially and later on revised (year 2012) again by NICSY under a separate contract. The updated report was submitted to State IT department for approval. As per DIT, estimated cost (approx. 75 crore) of project is very high and asked the department to reduce the estimated cost. Bank team has also gone through the report and has an opinion that there is room to reduce the cost. During the meeting, it was discussed that the project ICT team will get in touch with state IT department and work with them to reduce the estimate cost.

37. Further, PWD again would like to hire the services of NIC/NICSY (through single / direct sourcing) to do the following a) Business process review study b) prepare RFP for proposed on-line ERP application. Estimated cost of both the activities is approx Rs.48.2 lacs. The mission suggested that NIC being an organization with IT background, it is fine to give them the consultancy contract for preparing RFP for proposed application but for Business process review, NIC do not possess the right kind of experience. During the mission, it was discussed and agreed that the project ICT team would get in touch with NIC to assess their experience in executing similar type of assignment in the past for any State or GoI department. In case NIC has executed similar assignment in the past then project team will share the details with the Bank.

38. It was also communicated to the Bank team that after successful completion of proposed contract, project would again give another consultancy contract to NICSY for other project management activities (i.e. Bid management, monitor the work of System Integrator, technology transfer from SI to department etc). It is recommended that the project should combine the Scope of Work (SOW) of existing and future requirement in one TOR and select PM consultant (PMC) on the basis of services defined under the TOR. Mission has also discussed and finalized the SOW for PMC TOR. Project Nodal officer will finalize the TOR and send it to the Bank for No objection.

39. Mission met with the Deputy Director, Department of IT, and it was agreed that the Department of IT would appoint a dedicated staff to work with the project IT nodal officer for revising the cost estimates.

40. It was discussed and agreed with the project team that instead of developing and implementing ERP (as per the DPR) for PWD department, project will focus, develop and implement core modules only.

41. **Road Information System and Road Maintenance Management System.** The previous missions had detailed discussions with the PWD on the RIS/RMMS which is housed and predominantly used to prioritize the rural roads in HP. The Road Management System essentially comprises 3 major components: (i) data collection systems (like ROMDAS); (ii) data storage and retrieval and reporting systems (Road Info System); (iii) a back-end analyses system (like HDM-4 or any other equivalent system). The PWD has the items (i) and (ii) but needs to acquire the back-end analysis system like HDM-4 to do the prioritization of investments and funding requirements. This system needs to interface with the RIS to do the analyses and prioritization and produce reports. These reports could be query-based or pictorial based on whether GIS is being interfaced with them. Although the PWD has ROMDAS equipment (purchased under the PMGSY project), it is not being used and the data is being collected manually through visual inspection because there was no vehicle for carrying the equipment. The PWD acquired a new vehicle to host the ROMDAS instrument. Training to run the equipment is now organized by PWD.

42. The mission suggested that a small consultancy service be taken up for acquiring the HDM-4 and adapt it to HP conditions for the default values and interface it with the existing RIS. This consultant can also improve the querying and reporting formats and hand-hold the HPRIDC/PWD for a couple of

years helping them in data collection, inputting, analyzing and reporting to help prepare the annual investment. needs of the PWD/HPRIDC and the budget demand.

43. **PWD Gang Labor Productivity Study.** During the last mission HPRIDC had shared with the mission about the three pronged strategy which GoHP was planning to adopt to deal with the issue of gang labor. Moving forward on the planned strategy, GoHP has so far absorbed around 150 laborers with education background as clerks in the PWD department. Around 100 of them have attained the age of retirement, thus resulting in natural attrition. The PWD have also approached other departments in the state of Himachal Pradesh to consider recruitment of the skilled or educated laborers.

44. . The following table presents the share of gang labor costs in total spending on maintenance works over the years.

| Share of gang labor costs in total spending on maintenance works (in Rs. Crore) | | | | | | | |
|---|---|---------|----------|-------------------------|-------------------|---|--|
| Year | Total Expenditure for Maintenance of Roads including gang labor costs | | | Work Charged Gang Labor | Daily Waged Labor | Gang labor costs in total spending on maintenance works | % share of gang labor costs in total spending on maintenance works |
| | 1 | Plan | Non Plan | | | | |
| 2006-07 | 3.1 | 478.18 | 481.28 | 253.31 | - | 253.31 | 52.6 |
| 2007-08 | 5.09 | 671.97 | 677.06 | 417.19 | - | 417.19 | 61.6 |
| 2008-09 | 0 | 685.58 | 685.58 | 394.2 | - | 394.2 | 57.5 |
| 2009-10 | 132.22 | 756.31 | 888.53 | 456.74 | - | 456.74 | 51.4 |
| 2010-11 | 108.02 | 957.53 | 1065.55 | 559.24 | - | 559.24 | 52.5 |
| 2011-12 | 50.05 | 1157.45 | 1207.5 | 692.13 | 20.68 | 712.81 | 59 |
| 2012-13* | 38.41 | 1147.22 | 1185.63 | 615.11 | 47.36 | 662.47 | 55.9 |
| Expenditure during 2012-13 (upto 31-12-2013) | 16.39 | 727.96 | 744.35 | 399.15 | 14.24 | 413.39 | 55.53 |

*budget

45. The original strength of regular and daily waged laborers employed by PWD was 36,558 and 7,212 numbers respectively. This totaled to about 43,770 (consistent with the figure of 44,000 was mentioned in the Bank's appraisal document). However, during the past 4 to 5 years, because of (a) vacancies that have not been filled up, (b) positions have been abolished post retirement of people, and (c) persons placed at the disposal of the Finance Department for transfer to other departments, as of date, the PWD hired labor count is about 29,000. This is a reduction of about 15,000 persons over 4 years. This is also expected to further reduce in the coming years due to attrition and retirement and the freeze on fresh hiring.

46. **ISO 9001 QMS and 14001EMS Implementation.** The HPRIDC headquarters, two divisions of National Highways, three CMU units and the Finance Wing of HPRIDC have obtained ISO 9001 certification, which is valid until August 2013. For further audit and evaluation, HPRIDC intends to extend the existing contract. The mission was informed that the proposal for extension has been sent to the Bank for no objection.

47. ***Proof-Review of Tunnel Design.*** During the last mission, HPRIDC had informed that an international expert has been engaged for peer reviewing the designs of the tunnels. The mission was informed that the proof review has been completed and DPR preparation is currently underway. The draft DPR has been approved for the tunnels at Bangana-Dhaneta and Shilbadani–Telang (Bhubujot). The final DPRs for these tunnel sections are yet to be approved by the Board. With regard to the third tunnel at Holi – Utrala the consultants have encountered difficulties in carrying out the drilling operations. Hence, it has been decided by the state government / HPRIDC to replace Holi – Utrala with Chamunda – Holi for the DPR preparation. As regards the financing options are concerned, GoHP intends to take up the Bangana – Dhaneta section through PPP while financing options for the other two tunnels are still under discussion.

48. ***PWD/HPRIDC Human Resources Management (HRM).***The consultants had prepared a functional organization chart for the changed PWD. The mission was informed that the recommendations of the consultants have been approved by the Cabinet.

49. ***Road Accident Database Management System.*** The shortlist and RFP have been cleared by the Bank. HPRIDC has issued the RFP and invited proposals. The pre-bid meeting with the shortlisted consultants who had responded is slated for May 24, 2013. Participation of all the stakeholder departments in the pre-bid meeting is an essential pre-requisite to ensure proper coordination which is one of the most critical element in the development, implementation and sustainability of the RADMS. The mission suggested that to the extent possible the representatives of the stakeholders departments attending the pre-bid meeting have thorough domain knowledge and are authorized to answer queries / provide clarifications during the meeting itself. PIU shall include an addendum to the TOR mandating the geo-referencing of all the offices / hospitals of the police, PWD, health and family welfare and transport departments on the GIS maps to be procured for RADMS. The mission also advised that provision should be made for generating a matrix of vehicle and collision types with injury, hospitals, treatment regimens and outcomes (fatal, disability levels etc.) to take up periodic review for improving trauma care and standardize treatment regimen.

Financial Management

50. The implementation support mission reviewed the continuing adequacy of the financial management arrangements at the project and the progress made on the action plan agreed during the previous mission. The recent developments and key issues are highlighted :

51. ***Asset Accounting.*** As per the long term road map for HPRIDC it was envisaged to entrust the completed roads to HPRIDC. A decision by GOHP needs to be taken on the entrustment aspect so that the expenditure relating to the roads which are completed can be **capitalized** in the books of HPRIDC. An item in this respect will be included in the agenda of the Board meeting planned for the first quarter of FY 2013-14 (around July 15,013).

52. ***Staff Training.*** The Finance Manager made field visits to address the training needs of CSC Engineers on financial and commercial aspects of the contract. Under the project there will be training conducted by the technical wing at Shimla office on the Long Term Performance Based Maintenance Contract (LTPBMC) methodology. It was suggested that the finance manager and his staff should participate in these trainings to familiarize themselves of the new terms and conditions under this new methodology of contracting.

53. ***Supervision Consultant Payments.*** The variation in the supervision consultant contract has exceeded 15%.It was informed to the project that Bank's no objection needs to be obtained to continue to claim the payments made under this contract as eligible expenditure in IUFR.

54. ***Internal Audit.*** The action taken report on internal audit report for half year ended March 2012 and September 2012 and the internal audit for half year ended March, 2013 is under progress. These

actions are agreed to be completed by July 15, 2013. As agreed during the previous mission the contract of the existing internal auditor M/S Soni & Rustogi, a Chartered Accountant firm based out of Shimla, will be further extended to cover the audit till the closure of the project by September 30, 2013.

55. **External Audit.** The submission of the external audit report for FY 2011-12 was timely and there were no audit disallowance reported. For FY 2012-13 the mission team emphasized the need for early finalization of accounts and its timely submission to auditors for their review and issuance of audit report. External audit report needs to be submitted to the bank latest by September 30, 2012.

56. **Good Practice.** A variation committee has been formed under this project with powers delegated by the Board to approve variations. Managing Director (Chairperson), Engineer in Chief (PWD), Chief Engineer cum Project Director and General Manager cum Financial Adviser are committee's member. The regularization of the variations in the contracts ensures that the payments can be made for the works done or services availed in variation to the original contract.

57. For improving the efficiency in the time taken to process an IPC, a new process of submission of advance copy of IPC by the Supervision Consultant to finance wing has been introduced. As a result, the finance wing can simultaneously review the IPC and turnaround payments quickly on receipt of approval from the technical wing.

58. **Disbursement:** From the World Bank as on May 19, 2013, for IBRD Ln-48600-IN is USD 149.65 million which represents 68.03% of the loan of USD 220 million. The designated advance balance is USD 25.573 million. Disbursement under additional financing IBRD Ln.-81990-IN, which became effective on March 8, 2013, is NIL.

59. **ISR FM Rating.** Based on the above, project Financial Management is rated as *Satisfactory*. A detailed note on Financial Management is given in **Annex 10**.

Procurement

60. Procurement performance continues to be rated as **Moderately Satisfactory**, and the assessment is based on: (i). Delay in bidding of Long Term Performance Based Maintenance Contracts (LTPBMC); (ii). Quality of documentation such as bid document, RFP etc. submitted for Bank's review; (iii). Procurement of accident black spot improvements packages have not been initiated and delayed; (iv) Procurement of consultancy services for Road Accident Database Management System has been delayed.

61. **Procurement Plan:** The updated Procurement plan was shared with the mission and the same was discussed and comments provided. It was observed that there are few new activities such as bio-engineering works, IT procurement systems etc. which are being proposed and these should be included in the procurement plan.

62. The estimated costs for the three packages of Long Term Performance Based Maintenance Contract (LTPBMC) need to be filled in the updated procurement plan so that the method of procurement and the review of the Bank can be decided. The mission was informed that the identification of the roads for these three packages is still ongoing and once this is finalized the estimated costs would be filled up.

63. Since last mission, the project has carried out analysis for the poor response of the five packages of periodic maintenance of roads which could not be awarded and these packages have been broken down into smaller packages and bidding process carried out and the works have now been awarded. However there are still two packages of periodic maintenance for which procurement needs to be carried out.

64. **Civil Works:** Bank has issued no objection to the termination of ICB 5 and ICB 6 packages. The bid documents for the balance of works for the ICB 5 and 6 have been worked out. It has been agreed that ICB 5 be repackaged into two smaller packages one package following ICB and another package following NCB. Similarly ICB 6 balance works are being repackaged and taken up as one ICB and one NCB contract. The procurement plan has been updated accordingly.

65. The bid documents for the ICB packages for which no objection has been issued by the Bank have been tendered out. The bids for ICB 5 would be opened on June 4, 2013 and ICB 6 would be opened on June 20, 2013. The NCB document for the balance works of ICB 5 is under review by the Bank.

66. **Package 1** is has been performing slowly for the past two year now seems to pick up recently. There has been some progress since the last mission. The mission informed the HPRIDC to closely look into the implementation issues and resolve in line with the provisions of the contract.

67. **Package 3:** The review of the progress report submitted by the Supervision consultant, it is noted that there are still few meters of project length that are hindered in MS03 and MS 04.

68. **Package 4:** The review of the progress report submitted by the Supervision consultant, it is noted that the contractor is claiming that there are still few meters of project length that are hindered in MS01 and 02.

69. The mission was informed that a variation committee has been formed consisting of Managing Director (Chairperson), Engineer in Chief (PWD), Chief Engineer cum Project Director and GM cum Financial Adviser which would review and has the powers to approve variations in contracts. This has improved the review and clearance of the variation orders and thereby improving the payments to the contractors.

70. HPHPRIDC will timely seek Bank's concurrence for Extension of Time and variation proposals in line with the agreed procurement guidelines.

The progress of ICB works is covered in the Aide memoire.

71. **Contract of Supervision consultant:** During the mission it was informed that the contractual issues have now been resolved. The variation in the supervision consultant contract is now more than 15%, and hence the contract amendment needs to be submitted to the Bank for review and no objection. This was informed to the Project Director.

72. The duration of the construction supervision consultants (CSC) contract is now till end of June 2013. The mission was informed that the supervision consultant has submitted a proposal till the end of the civil works contracts and the same is under review by the project. The amendment and time extension is very critical as only 40 days are left for the present closing. The same should be submitted to the bank for review and issuance of no objection.

73. **New Consultancy Services:** The RFP for road accident database management system has now been issued to the short listed firms.

74. **Procurement Post review (PPR):** The procurement post review of a sample of contracts was carried out and a draft report would be shared. The key observations were informed and discussed with the project officials. It was observed that the procurement of the periodic maintenance works was carried out using e-procurement system and with two envelopes which is not in line with the agreed arrangements. The project informed that the NIC system as used under Bank funded PMGSY project was being used. It was conveyed that prior to using the system or following 2 envelop system the Bank should have been informed and an agreement reached.

Key Project Implementation Action/Activities

| | Procurement | | |
|----|--|--------|-----------------|
| 1. | A workshop of all key stakeholders is organized for Performance Based Maintenance Contracts (PCMC) | HPRIDC | At the earliest |
| 2. | Submission of updated procurement plan | HPRIDC | June 15, 2013 |
| 3. | Amendment of contract with the Supervision Consultant extending the services beyond | HPRIDC | June 15, 2013 |

| | | | |
|----|--|--------|-----------------|
| | June 30, 2013 | | |
| 4. | Rebidding and award of the ICB 5 and 6 packages | HPRIDC | Sept 15, 2013 |
| 5. | Selection of consultant for establishment and implementation of Road Accident Data Management System | HPRIDC | Sept 15, 2013 |
| 6. | Procurement of accident black spot improvements packages | HPRIDC | At the earliest |

Project Management

75. **HPRIDC Staffing.** Recently, there have been changes in the management of the HPRIDC. The Project Director and the Managing Director have recently been changed. Most of the staff is in place. GoHPis requested to ensure stability of the project management team.

76. **Project Monitoring and Reporting.** The mission requested HPRIDC to continue to use the agreed Project Report format (which contains 8 excel-based reports and has been agreed at the project appraisal stage) to monitor project progress. The mission requested HPRIDC to regularly update the Project Report and forward it to the Bank within 15 days after every quarter.

77. **Performance Monitoring Indicators (PMI).** The mission and HPRIDC jointly reviewed the PMIs and updated the value of PMI indicators based on available information. The status of achievement of the performance indicators is at **Annex 1**.

78. **Information Disclosure .** The mission reviewed two key transparency aspects on the project i.e. information disclosure and complaint handling mechanism to deal with various types of complaints. The mission was pleased to note that the website (himachal.nic.in/hpridc) has been organized better and now comprises of project procurement related information in the public domain for access. The website also comprises of a window for handling complaints including statistics on the number of complaints received and addressed.

79. **Compliance with Loan Covenants.** The status of compliance of the Project and Loan Agreement covenants is in **Annex 2**. All covenants are in compliance.

80. **Next Implementation Support Mission.** The next full implementation support mission is scheduled for October 2013.

IV. ANNEXES

- Annex 1** Progress of achievement of performance indicators
- Annex 2** Status of compliance of legal covenants
- Annex 3** Status of Key Project Implementation Action/Activities (agreed during the last Mission)
- Annex 4** Key Project Implementation Action/Activities (agreed during this mission and to be reviewed during next mission)
- Annex 5** People Met by the Mission
- Annex 6** Detailed Mission Comments on Upgrading Works
- Annex 7** Detailed Mission Comments on Maintenance Works
- Annex 8** Detailed Discussions on Social Issues and Agreed Actions
- Annex 9** Detailed Discussions on Environmental Issues and Agreed Actions
- Annex 10** Financial Management Issues and Actions
- Annex 11** Status of Upgrading Works
- Annex 12** Status of Maintenance Works
- Annex 13** Status of all Consultancy Services
- Annex 14** Status of Encumbrance in Upgrading Roads

Annex 1

Progress of Achievement of Performance Indicators

| Outcome Indicators | Baseline | Target Value by midterm | Target Value by completion | Value/Status of performance indicator |
|---|-----------------|--------------------------------|-----------------------------------|---|
| % of the entire core network (~4,000 km) in poor condition | 40% | 30% | =< 10% | 33% |
| Average speeds on the WB financed roads, which received upgrading, predicted using HDM-4, (% increase) | TBD in YR1 | 25% for completed stretches | 25% for completed stretches | 45% of road stretches have been completed. However, on 274 km of roads [about 63%] on which Dense Bituminous Macadam layer has been laid, speeds have increased by more than 25%. |
| Death rate on HP state highways (number of deaths involved in traffic accidents/1,000 veh) | 2.0 | =<2.0 | =<2.0 | 0.32 |
| Level of road user satisfaction with the entire core network, index 1-5 | 1.5 | 2.0 | 3.0 | 3.9 |
| Component One (Core Network Upgrading): | | | | |
| % of target roads (~ 447 km) of core network completed upgrading | 0% | 30% | 100% | 45%. However, 274 km of roads [about 63%] have been laid with Dense Bituminous Macadam layer. |
| % of target roads (~447 km) in excellent condition (no cracking; IRI < 3.5) | 0% | | 95% | 63% |
| % of fiscal year contracts let within 120 days of bidding (after deadline of bids received) | 0% | 90% | 100% | In 2012-13 = 100% Overall: Upgrading works = No procurement Consultancies = No procurement Maintenance works = 100% |
| % of PAPs paid compensation and provided with R&R assistance | 0% | 100% for Phase I | 100% for Phase II | Land compensation progress: Phase 1=100%, Phase 2 = 71%, R&R assistance progress: 73% |
| % survival rate for trees planted under the Project | 0% | | 50% | 56% |
| % of road users and project construction worker aware of correct ways of HIV/AIDS prevention and transmission | 10% | 30% | 50% | 74% |
| Component Two (Core Network Maintenance and Management): | | | | |
| % of target roads (~2,000 km) of core network receiving periodic maintenance | 0% | 50% | 100% | 86% |
| % of performance-based contract packages executed on target roads (~300 km) | 0% | 30% | 100% | 0% |
| % of 20 target locations receiving black spot treatment | 0 | 30% | 100% | 0%. Designs completed and bidding documents under finalization. |
| Full operation of stable road financing mechanism for the core network (~4,000 km) | Nil | | Yes | Draft Road Fund Bill is being |

| | | | | |
|---|-----|-----------|--|---|
| | | | | finalized. |
| Reduction in share of permanent gang labor costs in total spending on routine and emergency works | 75% | 65% | 50% | 56% |
| Setting up of Quality Assurance System | Nil | | HPRIDC (incl. 3 CMUs) completed ISO registration | Completed |
| Development of Accounting Policies and Procedures Relating to Road Assets | Nil | Completed | Recommendation implemented | RMMS developed and Annual maintenance plans are being prepared using RMMS system. |
| Rolling annual training plan prepared, implemented and evaluated | Nil | Yes | Yes | In progress |

Annex 2

Status of Compliance of Legal Covenants

| Description of Covenant | Date Due | Status |
|--|-----------------|---------------|
| GoHP shall maintain the Board of Directors of the HPRIDC with composition and powers sufficient to function and direct the carrying out of the Project in a timely and effective manner. | Recurrent | C |
| GoHP shall maintain a dedicated team of suitably qualified staff in HPRIDC both at HQ and in atleast 3 dedicated field divisions, with sufficient resources | Recurrent | C |
| HPRIDC shall prepare EMPs and RAP for Phase II roads in accordance with Operations Manual and R&R policy, satisfactory to the Bank | 04/05/2009 | C |
| HPRIDC shall implement the Project in accordance with Operations Manual, EMPs, RAPs, Financial Management Manual | Recurrent | C |
| GoHP shall transfer Loan Proceeds to HPRIDC within 3 weeks of receiving them from GOI | Recurrent | C |
| HPRIDC shall prepare and make public by March 31 of each year starting from 2008 an annual Road Maintenance Plan for core road network for following FY and implement it in a timely & efficient manner | Recurrent | C |
| HPRIDC shall prepare and make public by April 30 of each year starting from 2008 a core road network condition and traffic survey report and a core road network maintenance achievement report for the proceeding FY | Recurrent | C |
| GoHP shall have the financial statements audited by acceptable auditors and furnish the Bank the audited reports no later than 6 months after the closing date for the statements | Recurrent | C |
| HPRIDC shall maintain a financial management system in accordance with agreed requirements | Recurrent | C |
| GOI shall make Loan proceeds available to GoHP according to the agreed arrangements | Recurrent | C |
| HPRIDC shall prepare and furnish to the Bank quarterly Project Reports including agreed performance monitoring indicators no later than 45 days after end of each quarter | Recurrent | C |
| All goods, works and services to be financed out of the Loan shall be procured in accordance with the provisions of the Project Agreement | Recurrent | C |
| Prepare project reports for each fiscal year quarter and submit to Bank not later than 45 days after the end of the period. | Recurrent | C |
| Prepare and furnish to the Bank (a) by Nov 15, 2009, a comprehensive Project progress report satisfactory to the Bank; (b) two(2) impact assessment reports of the implementation of the RAP, the first by May 31, 2009 and the second within 120 days of completion of all resettlement under the project | | C |

Annex 3

Status of Key Project Implementation Action/Activities (agreed during the last Mission)

| S. No. | Key Actions | By whom | Target Date | Status |
|---|--|---------------------------------|---|---|
| Social Safeguards | | | | |
| 1. | Completion of land and structure acquisition of phases II roads and left out <i>khassras</i> of both the phases. | HPRIDC / NGO | September 30, 2013 | In progress |
| 2. | Structures saved due to design changes. Verify actual number of structures (including CPRs) affected and submit revised list of structures affected and actual entitled assistance amounts | HPRIDC/NGO | June 30, 2013 | In progress |
| 3. | Disbursement of R&R assistance in all roads for both the phases | HPRIDC / NGO | Phase I: June 30, 2013 Phase II: August 31, 2013 | In progress |
| 4. | Data on % THs received compensation and R&R assistance | HPRIDC | June 30, 2013 | In progress |
| 5. | Training on income restoration | HPRIDC / NGO | June 30, 2013 | In progress |
| 6. | Review and extension of NGO services | HPRIDC | June 30, 2013 | |
| 7. | Relocation of CPRs of all roads in both the phases | HPRIDC/ NGO | September 30, 2013 | In progress |
| 8. | Submission of Action Taken Report based on RAP Evaluation report | HPRIDC | June 30, 2013 | |
| 9. | Note on addressing safety aspects relating to social utilities - schools, hospitals | HPRIDC/Super vision Consultants | June 30, 2013 | |
| 10. | Plans for de-notification of land not required | HPRIDC | June 30, 2013 | In progress |
| 11. | Preparation of land plan schedules and limited SIA for 1.2 kms alternative road in Package 4 | HPRIDC/NGO | June 30, 2013 | In progress |
| Environmental Management (to be updated) | | | | |
| 12. | Sanction/approve full time EO proposal in CSC's team | HPRIDC | Immediate/March 31, 2013 | Done |
| 13. | Increase man-months of Bio-engineering Specialist and mobilize a supervisor level personnel | HPRIDC | March 31, 2013 | Done |
| 14. | Obtain Forestry Clearance for missing section (2.36 hac.) – Contract 6 | HPRIDC | April 30, 2013 | In principal approval obtained |
| 15. | Undertake assessment for the realignment section (1.3 km) in Contract 4 | HPRIDC/CSC | April 30, 2013 | Done |
| 16. | Undertake drainage restoration and implement safety measures in terminated contracts | HPRIDC CSC | Till Rebidding is Completed and Contractors take over | In progress |
| 17. | Undertake site clean-up and rehabilitation works | HPRIDC CSC/Contractor | Continuous | |
| 18. | Update report/data on re-plantation works for periodic maintenance works | HPRIDC | By August 31, 2013 | In progress |
| Procurement | | | | |
| 19. | Expedite the bidding and award for maintenance and PBMC contracts | HPRIDC | At the earliest | In progress |
| 20. | A workshop of all key stakeholders is organized early facilitated by an expert familiar with various contract conditions and its applicability and a clear Roles and | HPRIDC | At the earliest | To be conducted at the time of pre bid meetings of OPRC contracts |

| | | | | |
|-----|--|--------|----------------|----------------------|
| | Responsibilities Matrix is developed | | | with 2 days duration |
| 21. | Resolution of Contractual issues with the Supervision Consultant | HPRIDC | March 15, 2013 | In progress |
| 22. | Rebidding of the ICB 5 package | HPRIDC | March 15, 2013 | Rebidding in process |

Annex 4

Key Project Implementation Action/Activities (to be reviewed during the next Mission)

| S. No. | Key Actions | By whom | Target Date |
|---|--|---------------------------|---|
| Civil Works – Upgrading and Maintenance | | | |
| | PBMC – Identification of candidate roads | HPRIDC | June 10, 2013 |
| | Blackspot improvement – tendering | HPRIDC | June 15, 2013 |
| | Package 1 – Proposal to tackle the bridges | HPRIDC | June 30, 2013 |
| | Package 3 – Completion of Bridge and the bypass | Contractor / HPRIDC | June 30, 2013 |
| | Package 4 – (i) Road Construction to start on 1.2 km. and (ii) roughness measurement | Contractor / CSC / HPRIDC | (i) June 30, 2013 (ii) June 15, 2013 |
| | Package 7 & 10 – Package to be completed in all respects (including DLP) | Contractor / HPRIDC | June 30, 2013 |
| | Package 8 – Taking over of MS-3 | HPRIDC | June 30, 2013 |
| | Package 5 & 6 – Contract to be awarded | HPRIDC | ICB - August 31, 2013 NCB – September 30, 2013 |
| | Tendering and awarded of Balance Period Maintenance Work | HPRIDC | September 15, 2013 |
| | PBMC – Invitation of bids | HPRIDC | September 15, 2013 |
| | CSC – Contract Extension | HPRIDC | |
| Social Safeguards | | | |
| | Package 6 – Assessment of private land requirement and preparation of land plan schedules | HPRIDC | May 30, 2013 |
| | Assessment and initiation of legal process for de-notification of lands not utilized / acquired | HPRIDC | June 30, 2013 |
| | Disbursement of R&R Assistance for all packages and CPR relocation | HPRIDC | August 31, 2013 |
| | Provide customized safety aspects of social utilities – junctions, schools, hospitals | HPRIDC/SC | August 31, 2013 |
| | Completion of Balance Land Acquisition | HPRIDC | September 30, 2013 |
| Environmental Management (to be updated) | | | |
| | Complete the rehabilitation of debris disposal sites, including grading, plantation and bio-engineering works, provision of additional gabions and toe walls – with immediate attention on Contracts 7, 8 and 10 | HPRIDC/SC/Contractor | Immediate |
| | Undertake assessment for the realigned section (1.3 km) in Contract 4 | HPRIDC/SC | June 30, 2013 |
| | Share the draft Bidding Document for the Bio-engineering Works Contract covering upgrading works on contracts 7 and 10 for Bank's review | HPRIDC | June 30, 2013 |
| | Undertake fresh plantation in cases where very poor/poor survival rates have been recorded | HPRIDC/SC | September 30, 2013 |
| | Complete plantation/bio-engineering works on all remaining periodic maintenance roads during the coming monsoon (except those works which are yet to be procured) | HPRIDC/SC | September 30, 2013 |
| | Obtain Forest Clearance for Contract 6 (identified last year) by September 30, 2013 | HPRIDC | September 30, 2013 |
| Procurement | | | |
| | A workshop of all key stakeholders is organized for Performance Based Maintenance Contracts (PCMC) | HPRIDC | At the earliest |

| | | | |
|-----------------------------|---|---------|----------------------------|
| | Submission of updated procurement plan | HPRIDC | June 15, 2013 |
| | Amendment of contract with the Supervision Consultant extending the services beyond June 30, 2013 | HPRIDC | June 15, 2013 |
| | Rebidding and award of the ICB 5 and 6 packages | HPRIDC | Sept 15, 2013 |
| | Selection of consultant for establishment and implementation of Road Accident Data Management System | HPRIDC | Sept 15, 2013 |
| Financial Management | | | |
| | No objection for variation more than 15% on supervision consultant contract. | HPRIDC | June 30, 2013 |
| | Include agenda in Board Meeting for taking decision on transfer of assets for capitalization. | HPRIDC | July 15, 2013 |
| | Prepare action taken report for internal audit of half year ending March 31, 2012 and September 30, 2012 and share internal audit report for March 31, 2013 | HPRIDC | July 15, 2013 |
| | Appoint internal auditors for FY 2013-14 till closure of the project | HPRIDC | September 30, 2013 |
| | Finance staff training on OPRC methodology | HPRIDC | September 30, 2013 |
| Computerization | | | |
| | PMC consultant TOR & RFP | PMU, WB | 15 th June 2013 |
| | Develop Project plan for following IT activities - PMC, System Integrator | PMU | 15 th June 2013 |
| | Discuss existing DPR with State IT department to reduce the current estimated cost of computerization | PMU | 30 th June 2013 |
| | IT infrastructure improvement at RIDC & PWD (HO) - FnP server, Wi-Fi network, etc | PMU | 30 th Sept 2013 |
| | PMC consultant on board | PMU | 1 st Dec 2013 |

Annex 5

List of Persons met by the Mission

| S. No. | Name | Designation/ Address |
|--|-------------------------|---|
| <i>Govt. of Himachal Pradesh</i> | | |
| 1. | Mr. Narinder Chauhan | Principal Secretary , PWD, GoHP |
| 2. | Mr. Pardeep S Chauhan | Engineer-in-Chief , HPPWD, Shimla |
| 3 | Mr. Rajeev Sharma | Deputy Director, Department of Information & Technology |
| <i>HPRIDC</i> | | |
| 3. | Mr. Naresh Sharma | Chief Engineer – cum – Project Director, HPRIDC, Shimla |
| 4. | Mr. Suresh Ganju | Superintending Engineer, HPRIDC, Shimla |
| 5. | Mr. B. K. Sharma | Superintending Engineer, HPRIDC, Shimla |
| 6. | Mr. A.K. Dutta | E.E. (CM), HPRIDC, Shimla |
| 7. | Mr. Lalit Bhushan | E.E. (P), HPRIDC, Shimla |
| 8. | Mr. Bhavan Sharma | E.E. (T&D) HPRIDC, Shimla |
| 9. | Mr. Pritam Chand Bandan | E.E. (CMU) HPRIDC, Dharamshala |
| 10. | Mr. S.K.Sharma | E.E. (CMU) HPRIDC, Hamirpur |
| 11. | Mr. S.S.Kutlehria | E.E. (CMU) HPRIDC, Una |
| 12. | Mr. Rajeshwar Jaswal | E.E. (CMU) HPRIDC, Shimla |
| 13. | Mr. S. S. Rana | E.E. (Hort.) HPRIDC, Shimla |
| 14. | Mr. T. C. Negi | Social Development Officer |
| 15. | Mr. D. K. Nag | Environmental Engineer |
| 16. | Mr. Lalit Kumar Pandey | Nodal IT Officer |
| 17. | Mr. B. S. Chandel | A.E. (Hort.), HPRIDC, Shimla |
| 18. | Mr. Arvind Lakhnupal | A.E. (CMU), HPRIDC, Hamirpur |
| 19. | Mr. P. K. Sharma | A.E. (CMU), HPRIDC, Una |
| <i>HPRIDC (Finance)</i> | | |
| 20. | Mr. Anil Kapil | G.M.-cum-F.A. HPRIDC, Shimla |
| 21. | Mr. Virender Bhardwaj | Dy Manager (Fin.), HPRIDC Shimla |
| <i>The Louis Berger Group Inc.</i> | | |
| 22. | Mr. Andrew Bogle | Team Leader, CSC, LBG |
| 23. | Mr. Sanjay Kumar Singh | R.E (Pkg-1&2). LBG |
| 24. | Mr. Anoop Kumar | R.E. (Pkg. – 3, 4 & 6), LBG |
| 25. | Col. M.S.Bisht | R.E. (Pkg-7,9), LBG |
| 26. | Mr. Neeraj Kumar | R.E. (Pkg. - 8) LBG |
| 27. | Mr.V.K.Jha | R.E. (Pkg-10), LBG |
| <i>M/S Longjian Road & Bridge Co., China</i> | | |
| 28. | Mr. DiaoZaiXuan | Project Manager (Pkg - 1) |
| <i>M/S C&C Constructions, India</i> | | |
| 29. | Mr. AshwaniDogra | Project Manager (Pkg-3), C&C Construction |
| 30. | Mr. Sanjay Singh | Project Manager (Pkg-2), C&C Construction |
| <i>M/S NKG Infrastructure Limited</i> | | |
| 31. | Mr. Sanjay Rai | Project Manager (Pkg-9), NKG Ltd. |
| <i>M/S SomDatt Builders Ltd.</i> | | |
| 32. | Mr. Srikrishna | Project Director |
| <i>M/S Dilip-Valecha Limited (JV)</i> | | |
| 33. | Mr. Shivan | Contractor Representative |
| <i>M/S ANS Construction Limited</i> | | |
| 34. | Mr. R.C. Kaushal | Project Manager |
| <i>Consultant for Rural Area Linked Economy (CRADLE)</i> | | |
| 35. | Mr. Pranay Kumar | Team Leader, CRADLE |
| 36. | Mr. SurenderParmar | Dy. Team Leader, CRADLE |

Annex 6

Detailed Mission Comments on Upgrading Works

The Component 1 (Core Network Upgrading) of the project envisages upgrading of 447 km of roads in the Core Road Network (CRN). HPRIDC initially started implementing this component through 10 contract packages in two phases. However, midway into the project two of the contracts – namely packages 5 and 6 performed very badly and were terminated. These have now been further subdivided into 2 contracts each, taking up the total upgrading contract packages to 12.

Phase 1 Works: All five civil works contract packages of phase 1 upgrading works, which constitute a total length of 232 km, have been awarded at a total contract price of Rs 5890 million [approximately US\$ 130.9 million @ 1 US\$ = Rs 45]. In all these contract packages, the contractors and the supervision consultants have mobilized and the civil works are at various stages with physical progress ranging from 24% to 100% by December 31, 2012. The contract package 5 with a progress of 24% has now been terminated and divided into 2 contracts and the bids already invited.

| Package | Original contract price (Rs million) | Revised likely contract price excluding escalation (Rs million) | Commencement Date | Date of Completion (as per contract) | Revised Date of Completion (with approved EoT) | Value of work done (as of Dec 2012) in Rs million | Physical Progress (as of Dec 2012) w.r.t the revised contract price | % of hindrance-free stretches available |
|---------|--------------------------------------|---|-------------------|--------------------------------------|--|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 1 | 1265 | 1263 | 8 May 2008 | 7 Nov 2010 | 23 Nov 2012 | 682 | 53.97% | 100% |
| 2 | 979.5 | 920 | 14 May 2008 | 13 Nov 2010 | 9 July 2012 | 920 | 100.00% | 100% |
| 3 | 1028.2 | 988 | 14 May 2008 | 13 Feb 2011 | 4 August, 2013 | 838 | 84.89% | 100% |
| 4 | 335 | 361 | 10 Aug 2008 | 9 Feb 2010 | 30 June, 2013 | 306 | 84.79% | 98% |
| 5 | 2282.5 | 2280 | 5 June 2008 | 4 June 2011 | 13 Jan 2013 [TERMINATED] | 566 | 23.90% | 100% |

Phase 2 Works: All five civil works contract packages of phase 2 upgrading works, which constitute a total length of 203 km, have been awarded at a total contract price of Rs 3974 million [approximately US\$ 87.7 million @ 1 US\$ = Rs 45]. In these contract packages the works are at various stages with physical progress ranging from 5.5% to 100%. The contract package 6 with 5.5% progress has now been terminated and rebid as 2 contracts.

| Package | Original contract price (Rs million) | Revised likely contract price excluding escalation (Rs million) | Commencement Date | Date of Completion (as per contract) | Revised Date of Completion (with approved EoT / EoT recommended by the supervision consultants) | Value of work done (as of Dec 2012) in Rs million | Physical Progress (as of Dec 2012) w.r.t the revised contract price | % of hindrance-free stretches available |
|---------|--------------------------------------|---|-------------------|--------------------------------------|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 6 | 938.6 | 938.6 | 15 Aug 2011 | 15 Feb 2014 | 15 Feb 2014 [TERMINATED] | 30.0 | 5.5% | 90% |
| 7 | 626.7 | 550 | 8 Mar 2010 | 7 Sep 2011 | 15 July 2012 | 553 | 100% | 100% |
| 8 | 1422.2 | 1436 | 26 Oct 2009 | 25 July 2012 | 29 March, 2014 | 1029 | 72.3% | 99% |
| 9 | 430.2 | 493 | 1 Dec 2009 | 31 May 2011 | 24 October, 2013 | 255 | 59.2% | 100% |
| 10 | 560.7 | 425 | 8 Mar 2010 | 7 Dec 2011 | 17 Sep 2012 | 425 | 100% | 100% |

The mission, along with the officials of HPRIDC and the Supervision Consultants, visited packages 1, 3, 4, 7, 8, 9, 10 and then discussed the progress of Works with the Contractors of all phase 1 and phase 2 Roads.

Contract Package 1: Mehatpur-Una-Jahalera-Amb Road; Contractor: Longjian Road and Bridge Limited Company (about 44km): There has been some progress since the previous mission in January 2013 especially in completing the bituminous layers of DBM in heavily congested built-up sections of about 5.5 km. The progress of works is far behind schedule. The current progress is about 54 % after a time elapse of 5 years, while the project should have been 100% completed by November 2012. The contract management and other status remains the same as last mission observations. In spite of 100% encumbrance free land being now available to the contractor to work, the progress is slow and in the past 3 months there has been only 3% progress i.e. about 1% every month. The contractor is plagued with cash-flow problems in spite of HPRIDC extending timely payments and advances. No financial support is being given to the site organization by the contractors' headquarters. HPRIDC has started imposing the liquidated damages which also harms the cash flow.

The mission members met with the contractor's project manager at site and he expects to complete all DBM works by end-June 2013 and commence BC works by early July 2013. The structural works are largely incomplete and much behind schedule. Mission urged the contractor to come up with a resurrection plan for completing the contract on time with clear specifics of how much resources will be required to do the job versus his actual cash flow requirements on a monthly basis. The progress on structural works has been very slow and it was discussed that the Employer, Engineer and the Contractor come to an agreement and send a proposal for completing the structural works to the Bank by June 30, 2013. It is only after such a plan is put in place that the HPRIDC and Engineer can come up with solutions and recommendations for further steps. The HPRIDC senior officers also asked the contractor's main representative in China to meet them in Shimla to discuss the work plan on how the structures will be tackled in the next few months.

During site visits the mission made a few observations –

- The quality and finish of structural and bituminous works wherever completed were largely satisfactory;
- In recently completed DBM stretches the aggregate sizes in some places appeared to be much bigger and the mission requested to check this out and rectify the design and grading mix, if required.
- Large portions of GSB/WMM are left uncovered (some of them nearly for a year) and these need to be covered up by bituminous courses as soon as possible before the monsoons.
- Safety barricading in many places is missing especially where there is a huge difference in road levels;
- Quality of finish of kerbs at central median needs to be improved in some stretches;
- CD and bridge structures are progressing very slow and these need to be accelerated based on an action plan for resources and cash flow.
- There has been a tilt in the well of the bridge @ KM 16 which seems to have hit the rock and so need careful tackling by the contractor.

Contract Package 2: Una-Bangana-Barsar Road; Contractor: C&C Construction Limited (Length revised to 44.7km from 44.823km): The mission was happy to note that the project is completed and the DLP of the last section is ending in December 2013. The final milestone was taken over by the Employer on December 12, 2012. Some painting works are ongoing and the bio engineering works are to be completed before the close of DLP. During discussion at the site office it emerged that the final cost of the project would be about Rs 900-910 million as against the original contract value of Rs 989.4 million.

Key points observed during the site visits are:

- Most of the points mentioned during the last mission have been rectified.
- The side drains and other construction/landslide debris need to be cleared and cleaned as soon as possible before monsoons. The debris on the parapet wall gaps should be cleared to ensure that proper drainage happens from the road surface.

All efforts should be made to complete and work out the final VO as well as the contract cost as soon as possible. During the remaining 6 months of the DLP all final problems in the punch list and other issues observed during this period should be rectified and handed over finally to the Employer.

Contract Package 3: Barsar-Jahu Road; Contractor: C&C Construction Limited (originally 45.8 km long and now modified to 46.03km): After lapse of 5 years of the contract period, the physical progress is only about 84.9% as against 93.5% as per the revised contract programme and cost. After the EOT-6 the closing date for milestone 6 is August 2013. Milestones 1, 2 and 3 have been taken over. The problem with the 50m land being not available for constructing shoulders and side drains is now solved. The progress in Milestone 4, though good, is still below par by about 8.3% in terms of requirements and targets. The embankment needs to be completed on the bypass. One abutment and 3 more spans of superstructure on the bridge have to be completed as well as the final approach at the Mandi district side. The land on the Mandi district side has been handed over to the contractor and works on the embankment and retaining wall construction started. Bituminous concrete has been completed in about 43.4 km of the 46 km of road stretches while DBM has been completed in 43.9 km.

The mission during its site visit observed that

- The debris and bituminous material disposal is still not very satisfactorily being done. Debris and dirt accumulated in the parapet wall gaps and the drains have not been cleared in many places This will affect the surface drainage and needs to be periodically carried out by the contractor till the end of DLP.
- The lane markings are getting darkened and breaking up within a year of painting and this needs to be rectified in the milestones 1, 2 and 3.
- All expansion joints on bridges are to be made properly functional by removing the debris within. Small stretches of gabion walls have yet to be erected. This was pointed out in the last mission but the problem still persists on some bridges.
- In the Jahu bypass, care should be taken to provide proper filter material and functional weep holes to be provided on retaining structures to prevent water pressure accumulation and damage to the walls, as has been observed in some other places;
- In the Jahu bypass bridge, mission requested to the contractor to ensure the proper seating of expansion joints to prevent bumping at every joint as was observed in one of their previous bridges;
- In the Jahu bypass bridge, embankment protection works like guide bunds or equivalent should be designed based on peak flow requirement.

The contractor has made assurances to the HPRIDC that the entire road (including Jahu bypass) would be substantially completed by August 4, 2013 and ready to be taken over.

Contract Package 4: Jahu-Kalkhar Road; Contractor: ANS Construction Limited (length about 15.4km): The full stretch though acquired fully is now 100% available to the contractor for construction without any hindrances. However, here has been a re-alignment proposed for about 1.2km due to the subsidence of the existing road mentioned during the previous mission memoir. This new alignment stretch is not yet encumbrance free of LA and R&R issues and hence this needs to be expedited by the HPRIDC and the Revenue department. The progress reported is about 85% after 4 years and 9 months of contract period as against a planned achievement of 98% as per the latest revised schedule. EOT has been requested and approved up to June 2013 for the original section. The EOT requirement of the realignment

will be decided by the engineer as soon as the land availability status is known. Mission reiterated the fact that this decision has to be made by the Engineer/SC before the lapse of the original contract in June 2013. It was therefore agreed by the HPRIDC and the Engineer that the revenue persons will be summoned to the site and land requirement pegged out at the site by May 31, 2013.

There has been a large improvement in the quantum of work done since the last mission in January 2013 and lots of bituminous works have been completed. The mission had the following observations -

- Overall progress seems behind schedule and quality of the bituminous works appears good;
- Roughness tests on completed SDBC and other bituminous courses should be done soon after the layer is completed without waiting for a long time – for pending sections it must be completed by June 15, 2013;
- The shoulders in many places need to be graded and compacted as per specification using appropriate material;
- Stretches of uncovered DBM should be covered by SDBC, as well as uncovered WMM should be covered by the DBM layers before the onset of monsoons in the next month;
- The workmanship of concreting, stone masonry and gabion walls is not very good.
- There are landslides happening at a few places along the road and many complaints are being received from the residents about the effects on their household. Although much of these cannot be attributable to the road construction activity, the contractor will need to accommodate complaints and suggestions wherever he is responsible for causing problems due to debris disposal and poor drainage.
- The contractor has yet to complete the construction of side-drains as well as retaining structures like the walls and the gabions at appropriate places.
- Debris disposal lying on the side of the road as well as grading/sloping of the extra-widening/vehicle refuges, especially on the valley side is not done in some places and needs to be removed. Dump yards on the valley side need to be benched, trimmed and finished up with drains wherever appropriate to allow water flow and prevent pavement damage;
- Lane marking, fixing of signs, bus stops and crash barrier works also has to be taken up in most sections to mark substantial completion and taking over of the section.

Mission advised the client and the Engineer to take over whatever sections have been completed to the contractual requirements by the contractor by June 2013. The rest of the sections where works have not been completed due to the contractor's fault will need to be discussed and dealt with as per the contract and the sections eligible for EOT should be given the same. However, all this needs to be done before the closing date.

Contract Package 5: Theog-Kotkhai-Rohru Road; Contractor: Longjian Road and Bridge Limited Company (About 81km of 2-laning works): This contract has been terminated by HPRIDC in July 2012. The remaining works were estimated and bids invited. The HPRIDC has now decided to break up the original contract length into two contracts, and has bid them out accordingly. The mission expressed its satisfaction with the progress shown. Alternate mechanism for maintaining the existing road through an interim contract has been decided to keep the road under motorable conditions.

Contract Package 6: Sarkaghat-Ghumarwin Road; HCIL – DRAIPL JV (Approx length 41.950 km): This contract has been terminated by HPRIDC in October 2012. The remaining works were estimated and bids invited. The HPRIDC has now decided to break up the original contract length into two contracts, and has bid them out accordingly. The mission expressed its satisfaction with the progress shown. Alternate mechanism for maintaining the existing road through an interim contract has been decided to keep the road under motorable conditions as well as to clean up the sites and debris removal

Contract Package 7: Ranital-Kotla Road; Contractor: Valecha – Dilip JV (Length about 39.173km): The physical progress is about 100% completed to reasonably good overall quality, except for the items on the punch list needing to be completed during the DLP. However, the HPRIDC and the Engineer felt that the contractor was not physically present during the first 6 months of the DLP and is only now attending to the faults as the DLP comes to a close in next couple of months.

The mission made it clear that the Project Manager should meet with the Engineer and HPRIDC and discuss the way forward about how the DLP works would be handled and rectified and further minor variations needed for rectification to be dealt with to mutual satisfaction. It was agreed during the field visit that the Engineer and the Contractor will agree on Key Dates for completions of balance critical activities and works by May 31, 2013 and then adhere to the schedule before the final taking over of the road.

The mission made the following observations during the site visit:

- There were some stretches where the lane markings were required but absent and this should be done up along with other safety appurtenances wherever appropriate;
- Debris disposal and site clearance at places where there have been minor/major land slips have to be carried out either as a variation or as per the original contract as per provisions and directions of the Engineer;
- There has been a subsidence of the road for about 30m at Chainage 21+800 which needs to be rectified through appropriate water drainage solutions and then constructing of retaining wall and protection works;

Contract Package 8: Kumarhatti-Nahan Road; Contractor: Somdatt Builders Pvt. Ltd (about 71.7 km): Milestones 1, 2 and part of 3 have been substantially completed and taken over by HPRIDC- the milestone 3 has been taken over only recently on May 9, 2013. 100% of the remaining stretch without encumbrances is now available to the contractor for construction since the forest clearance is obtained for part of the 3rd milestone and 4th milestone stretches of the contract. The remaining part of MS-3, comprising about 11 km will be taken over by June 30, 2013 while the MS-4, comprising about 18 km, will be taken over only in March 2014. There has been a good progress since the last mission and the current level of progress stands at 72.3% after nearly 3 years and 7 months of contract period as against a planned achievement of 80% as per the revised work plan after granting of latest EOT. The contract commencement date is in October 2009 and original completion date was in July 2012. EOT has been granted up to March 29, 2014. However, based on the quantum of work done and the remaining works it appears to the Bank mission that works can be substantially completed by the end of the closing date.

The mission was happy to note that the observations during the previous visit, on planning and the quality of DBM laid and many other issues raised have been complied to by the contractor. There has been a substantial improvement in the progress of works and in mobilizing additional equipment and work gangs. The mission was also advised that by re-designing the alignment in some places 12 water storage ponds were saved which is particularly commendable keeping in mind that this stretch of road passes through water scarce places.

During the site visit the major observations of the Bank team are:

- Overlay has now been laid in the first 300 m of the road in the army section;
- Some debris/bitumen waste is still found lying in the gaps between parapet walls on the valley side blocking the transverse flow of water from the road. All such gaps and other drainage outlets should be cleared of construction debris and mud. Some of the hill side drains and some culvert vents were found blocked with debris and needs to be cleared as soon as possible. Blocked weep holes were still

found on many retaining walls and need to be cleaned up as soon as possible. Periodic inspection of these should be done by the contractor till the end of its contract and cleaned up soon after.

- In certain stretches the quality of SDBC has many cracks. These need to re-laid or rectified before the laying of the BC to ensure that they do not result in reflective cracking on the road surface.
- The maintenance of the existing road in MS-4 needs to be taken up to ensure a reasonable riding quality for traffic in the last 20 km.
- The finishing and workmanship of the drains in some places like in the town of Nainatikker is very poor. The water from the road cannot enter the drains due to poor drains being a bit higher than the road level. All this should be rectified as soon as possible before the rains.
- In many places on the valley side of the roads, it was noted that the retaining walls (MS-4) were projecting above the shoulder level. This might prevent transverse flow of water into the valley and hence holes or cuts should be made to allow the flow of water.
- The progress on parapet wall and CD works needs to be accelerated. The quality control by the main contractor on the parapet wall works of the sub-contractor is not good and the quality leaves a lot to be desired in terms of workmanship and finishing.
- In some sections it was observed that the side railing has not been anchored down to the ground or to the nearest parapet as per good practice principles.
- Need to cover up the uncovered WMM and DBM with the top layers as soon as possible before the monsoons.
- In some places dumping yards have freshly deposited debris which needs to be flattened and finished.

The mission was happy to note that certain VOs which was discussed during the previous visits have finally been/being carried out – (i) to overlay the road stretch within the army zone; (ii) VO for whitewashing the parapet walls and using reflecting studs/stickers to outer walls and railing. Mission also requested that from the safety point of view it would be good to have reflecting studs/cat-eyes along the centreline of the road and any extra quality required may be estimated and done by the contractor under a VO. Also, it may be a good idea to pave the road a bit more on the inner side of curves in MS-4 to ensure that the rear wheels don't spoil the earthen shoulders

Contract Package 9: Draman-Sihunta Road; Contractor: NKG Infrastructure Ltd: The progress is about 59.2% after 43 months of contract elapse which is about 7% since the last mission in January 2013. The contract commenced on December 1, 2009 and had duration of 18 months. The Engineer has now approved an EOT up to April 2013. It has been reported by HPRIDC that 100% of land has been handed over to the contractor as of date. In spite of the EOTs approved and the entire road stretch being handed over encumbrance free to the contractor since August 2011, the works will not be completed on time even by the present schedule. Unfortunately, it is reported that very little progress has been made at site in the past 4 months.

Since the situation appeared grim, the mission advised that a revised resource-based contract programme be submitted by the contractor which after approval by the Engineer and the HPRIDC needs to be shared with the Bank before end-May, 2013. The contractor is also being continuously warned that failing submission of a realistic catch-up programme or accelerating the work progress the HPRIDC and the Engineer would be forced to resort to contractual provisions deemed necessary to issue notices of slow progress and application of LD etc. The contractor during the site visit promised to accelerate and complete the works in the next 6 months

Large sections of WMM are left uncovered and the mission was concerned that this would get spoiled during the ensuing monsoons. The WMM layers in many other places have disintegrated and got spoiled which would need to be re-done. DBM which was also laid quite some time back is also getting spoiled with potholes and cracks developing with raveling of aggregates. Shuttering and concrete finishing on

completed and ongoing structural works was not up to the mark. The Engineer/CSC for the contract also needs to pull up its performance at site and improve its reporting which had lots of discrepancies.

Contract Package 10: Bhawarna-Lambagaon Road; Contractor: Valecha – Dilip JV (approx length of road 26.28 km of Intermediate Lane road): The physical progress is about 100% completed and to good overall quality, except for the items on the punch list needing to be completed during the DLP. However, the HPRIDC and the Engineer felt that the contractor was not physically present during the first 6 months of the DLP and is only now attending to the faults as the DLP comes to a close in next couple of months. The mission made it clear that the Project Manager should meet with the Engineer and HPRIDC and discuss the way forward about how the DLP works would be handled and rectified and further minor variations needed for rectification to be dealt with to mutual satisfaction. It was agreed during the field visit that the Engineer and the Contractor will agree on Key Dates for completions of balance critical activities and works by May 31, 2013 and then adhere to the schedule before the final taking over of the road.

The mission during the site visit had the following observations:

- In some places shoulder re-grading and compaction needs to be undertaken;
- Minor earth slips and rock slides have happened and these need to be rectified and the drains repaired/cleaned;
- Whitewashing of parapets to be done;
- At Km 20+220, the hill side breast wall has failed – probably due to excess water pressure due to clogged weep holes and improper placement of filter media behind the walls. This situation needs to be rectified before completion of DLP;
- At Km 23+200, the road embankment has failed due to failure of the slope on the valley side due to improper design of walls. This situation should be rectified before the close of the DLP.

Construction Supervision Consultant Contract (Louis Berger Group): During the site visits to the roads, the mission observed that the performance of the consultant has considerably improved due to some intelligent rationalization of manpower and bringing in of environmental and engineering experts. However, there are problems in some packages with reporting and other supervision aspects which have been brought to the notice of the team leader and needs to be rectified as soon as possible. Similarly, there were complaints from the HPRIDC about the quality of IPCs being certified by the Engineer and that these have a lot of discrepancies and mistakes.

Mission also advised the HPRIDC to take appropriate action to extend the duration of the services of the consultant to be consistent with the closure of the upgrading works contracts. This needs to be done as soon as possible before the end of the contract of the CSC in June 2013 i.e. before the contract becomes null and void. During discussions, post the site visits, it emerged that many of the issues discussed during the previous mission on the cash flows and payment problems have been resolved. However, a few issues remain and the mission urged the HPRIDC and the consultant to sort these out amicably to move forward.

Mission advised the CSC that they should also set their house in order and resolve all systemic issues pertaining to quality of documentation produced by them as well as the issues of QC/QA of works at site. All site related issues should not wait for the Team Leader's site visit or the Bank mission to be resolved. There should be sufficient skill and delegation at the site level for resolving minor issues of contract and quality.

Annex 7

Detailed Mission Comments on Maintenance Works

The Project includes periodic maintenance of about 2000 km of roads in CRN [Core Road Network] of the State. The works have been taken up in three tranches. Periodic maintenance of 1280 km of roads in CRN has been completed, works in about 3.5 km of roads are in progress, and contracts for works for another 500 km (including performance-based maintenance contracts) are to be procured. Tranche 1 works have been completed. Tranche 2 works on all contracts except one have been completed. Bio-engineering aspects in many contracts have may need to be re-done because of lack of survival issues.

Implementation of Tranche-1. Periodic maintenance of 532 km of roads in 25 contract packages has been completed.

Implementation of Tranche-2. 517 km of roads are being improved in tranche-2 maintenance works all of which have been completed. Only in one contract some bio-engineering works are still pending completion.

Implementation of Tranche-3. Periodic maintenance of 414 km of roads is taken up in tranche-3. Works in about 231 km of roads have been completed. Of the remaining 183 km, contracts for 95 km of roads have been now awarded and under progress. Another 88 km of road contracts are waiting to be tendered either first time (2 packages of 33 km) or after have been cancelled (2 packages of 55 km). There seems to be a problem of insufficient interest in a couple of these contracts even when they were bid out previously. The mission advised HPRIDC to substitute with equivalent length roads of approximately the same cost and priority and carry on with the bidding as soon as possible. It was agreed that all the remaining contracts will be awarded by mid-September 2013.

Long Term Performance Based Maintenance Contracts (LTPBMC). PWD/HPRIDC had selected 441 km of roads in North Zone, Central Zone and South Zone for piloting LTPBMC works. The Bank had communicated its no-objection to the bid documents for PBMC and the bids have been invited for one package of Hamirpur zone of size of 53km. Mission advised the HPRIDC that they should not have a routine type of pre-bid meeting but should be a more detailed 2-day affair with the officers explaining to the contractors the uniqueness of this type of contract and the salient features of operation, execution and payments. If possible the HPRIDC persons should visit AP roads under LTPBMC and they should try and get some outside expert from another state to also explain how the contracts work in their state.

The mission was, however, disappointed that only 53km of a originally planned 441 km have been tendered. Since some of the selected roads have been declared as National Highways, some others have not been in close proximity to the rest of the roads and few others are too heavily failed to make the cut for LTPBMC, the HPRIDC has decided to modify the remaining list of roads. Mission urged the CE cum PD of HPRIDC to expedite the selection and finally prepare the DPR and bidding documents in the next 3 months to enable inviting bids before the next supervision mission in September 15, 2013. Mission reiterated that roads selected for LTPBMC should be in a maintainable condition largely through routine maintenance interventions and there should not be many failed sections requiring structural overlays.

The Bank team visited the selected roads in Hamirpur zone for LTPBMC. Mission felt that the selection of the roads were quite appropriate since most of the road sections was in fair condition and only a few sections were in very poor condition. The road from Sandhol was in better condition while the Hamirpur-Jahu road was slightly more deteriorated but still maintainable under LTPBMC type works. PMC of

about 12 km of the second road will be done in the next 3 months. The second road might require more inputs under initial rectification and minor works which the HPRIDC needs to check before the pre-bid meeting.

Mission strongly advised that the PWD/HPRIDC maintenance on the selected roads for LTPBMC should not be stopped till the contracts are awarded and contractor mobilized. Similarly, the contract documents should be shared with the finance wing of the PWD to alert it that the payment mode here is different from the conventional input-based contracts.

Annex 8

Detailed Discussions on Social Issues and Agreed Actions

1. **Land Acquisition:** The project has a total of 10 packages grouped into two Phases, each Phase consisting of 5 packages. For Phase I roads, the project requires a total of 113.51 ha of land for the purpose of road widening and strengthening, of which 47.19 ha is private land spread across 217 villages. For Phase II, the project requires 45.5706 ha of land, of which 13.6069 ha is private land to be acquired from 124 villages. Land acquisition is complete in all packages except for Package 6 and for newly proposed 1.2 kms bypass in Package 4. In all the packages compensation has been disbursed, except for those which have been referred to court.

2. In Package 6 land acquisition is progressing slowly due to demands for higher compensation rates for land under acquisition. In Package 4 village Suneharu, about 1.2 kms of built in road was shrunk due to certain geographical changes. As an alternative, HPRIDC now plans to build alternative road. From preliminary review it appears that there may be requirement of some private land for building the alternative road. It is agreed that the HPRIDC will assess the requirement of private land and prepare Land Plan Schedules before end May 2013. It is also agreed that the affected persons will be compensated and assisted as per the provisions of the HPSRP R&R Policy.

3. The HPRIDC agreed to complete balance land acquisition before September 30, 2013.

| Package | Total Number of villages | Negotiation Completed (no of Villages) | Award Announced (no of villages) | Disbursement Made (no of villages) |
|-----------------|--------------------------|--|----------------------------------|------------------------------------|
| Phase I | | | | |
| 1 | 35 | 35 | 35 | 35 |
| 2 | 54 | 54 | 54 | 54 |
| 3 | 59 | 59 | 59 | 59 |
| 4 | 11 | 11 | 11 | 11 |
| 5 | 58 | 58 | 58 | 58 |
| Total | 217 | 217 | 217 | 217 |
| % to total | 100 | 100 | 100 | 100 |
| Phase II | | | | |
| 6 | 37 | 37 | 14 | 4 |
| 7 | 30 | 30 | 30 | 30 |
| 8 | 20 | 20 | 20 | 20 |
| 9 | 7 | 7 | 7 | 7 |
| 10 | 30 | 30 | 30 | 30 |
| Total | 124 | 124 | 101 | 91 |
| % to total | 100 | 99.2 | 81.5 | 73.4 |

4. **The Impact - structures:** Out of total 1907 affected households, 1253 are titleholders and rest are non- titleholders. All structures are affected partially. The project is also affecting 149 common property resources of which 110 have been relocated and 11 have been saved so far. CPR relocation is complete in all packages except in Package 6. The table below provides the detail of package wise impact.

| Package | Number of affected Households - Structures only | | | | Tenants | CPRs | | |
|------------|---|-------------------|-----------|--------|---------|-------|---------|-------|
| | Titleholders | Non- Titleholders | | | | Total | Shifted | Saved |
| | | Encroachers | Squatters | Kiosks | | | | |
| 1 | 255 | 6 | 0 | 34 | 174 | 4 | 4 | |
| 2 | 431 | 6 | 3 | 11 | 140 | 17 | 16 | 1 |
| 3 | 297 | 21 | 0 | 0 | 7 | 27 | 20 | 7 |
| 4 | 20 | 4 | 0 | 0 | 7 | 7 | 4 | 3 |
| 5 | 25 | 6 | 1 | 0 | 23 | 25 | 25 | |
| 6 | 61 | 126 | 3 | 0 | 44 | 28 | 0 | |
| 7 | 46 | 16 | 0 | 0 | 0 | 6 | 6 | |
| 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 4 | 0 | 4 | 1 | 5 | 5 | |
| 10 | 117 | 4 | 0 | 0 | 9 | 30 | 30 | |
| Total | 1253 | 193 | 7 | 49 | 405 | 149 | 110 | 11 |
| % of total | 65.7 | 10.0 | 0.3 | 2.5 | 21.23 | | 73.8 | |

5. **Structure removal:** Though substantial progress has been made in disbursement of compensation (for TH) /assistance (NTH) for structures, the process of removal still has to be improved. HPRIDC has so far identified 1499 residential and commercial structures within the Corridor of Impact which are affected partially. Out of the total, about 1117 have been removed and repaired & 43 have been saved.

| Package | Total Number of structures (THs + NTHs) | Number of structures removed | Number of structures for which compensation/assistance has been paid | Structures Saved |
|------------|---|------------------------------|--|------------------|
| 1 | 295 | 229 | 229 | 5 |
| 2 | 451 | 367 | 367 | 3 |
| 3 | 318 | 279 | 265 | 32 |
| 4 | 24 | 20 | 23 | 3 |
| 5 | 32 | 30 | 30 | |
| 6 | 187 | 0 | 0 | |
| 7 | 62 | 62 | 62 | |
| 8 | 1 | 1 | 1 | |
| 9 | 8 | 8 | 8 | |
| 10 | 121 | 121 | 121 | |
| Total | 1499 | 1117 | 1106 | 43 |
| % of total | | 74.3% | | |

6. **Disbursement of R&R assistance:** The disbursement of R&R assistance has not yet been complete. So far INR 43.5 million has been disbursed which is approximately 69.7 percent of the total amount. However there may be reduction in the amount to be disbursed because of saving some of the notified structures from removal. This exercise is in progress and will be finalized before end July, 2013. Substantial undisbursed amount of R&R assistance relates to training assistance and the amount related to those structures which were referred to court due to disputes. It is estimated about 22% of the total amount remains undisbursed. Most of the undisbursed amount is in Package 3. There could be reductions in the total amount to be disbursed due to savings of structures from removal. Considering this fact, the

HPRIDC should identify the reasons for non-disbursement and prepare the details thereof package wise. It is agreed that the HPRIDC will work out the details and identify the reasons and submit a note package wise to the Bank before end June, 2013. In any case, disbursement of assistance amount has to be completed for all the packages before end August, 2013.

| Package | Name of the Road | Amount Approved by DLC | Amount Disbursed | Balance | Training Amount | Amount not paid due to Court Case/Dispute |
|---------------------------|----------------------|------------------------|------------------|-----------------|-----------------|---|
| 1 | Mehatpur- Una-Amb | 14568597 | 11655218 | 2913379 | 1028000 | 554849 |
| 2 | Una –Barsar | 16051072 | 12360747 | 3690325 | 744000 | 576243 |
| 3 | Barsar-Jahu | 18527457 | 8266687 | 8758640 | 128000 | - |
| 4 | Jahu-Kalkhar | 5671944 | 5492044 | 179900 | 76000 | - |
| 5 | Theog-Rohru | 6253565 | 4548218 | 1705347 | 120000 | 500000 |
| Sub Total Phase I | | 61072635 | 42322914 | 17247591 | 2096000 | 1631092 |
| 6 | Sarkaghat-Ghumarwin | - | - | - | - | - |
| 7 | Ranital-Kotla | 385103 | 324603 | 60500 | 56000 | 4500 |
| 8 | Kumarhatti- Nahan | 196806 | 196806 | - | - | - |
| 9 | Draman-Sihunta | 177400 | 173400 | 4000 | 4000 | - |
| 10 | Bhawarna-Jaisinghpur | 585080 | 505080 | 80000 | 80000 | - |
| Sub Total Phase II | | 1344389 | 1199889 | 144500 | 140000 | 4500 |
| Total | | 62417024 | 43522803 | 17392091 | 2236000 | 1635592 |
| % to total | | | 69.7% | | | |

7. **Disbursement of assistance for CPR relocation:** The disbursement of assistance for CPR relocation is also slow. As against the approved amount of INR 8.05 million, so far approximately INR 5.72 million has been disbursed. This is largely located in Packages 1 and 3. This also would be confirmed after re-verifying the CPRs those were saved from removal. It has been agreed that all relocation will be completed before August, 2013.

| S. No | Name of the Road | Amount Approved by DLC (INR) | Amount Disbursed (INR) | % disbursed |
|-------|----------------------|------------------------------|------------------------|-------------|
| 1 | Mehatpur- Una-Amb | 338754 | 183327 | 54.12 |
| 2 | Una –Barsar | 1453382 | 1102301 | 75.84 |
| 3 | Barsar-Jahu | 2148672 | 913500 | 42.51 |
| 4 | Jahu-Kalkhar | 383900 | - | 0.00 |
| 5 | Theog-Rohru | 1488325 | 1316325 | 88.44 |
| 6 | Sarkaghat- Ghumarwin | - | - | - |
| 7 | Ranital-Kotla | 601417 | 567279 | 94.32 |
| 8 | Kumarhatti- Nahan | - | - | - |
| 9 | Draman-Sihunta | 106800 | 106800 | 100.00 |
| 10 | Bhawarna-Jaisinghpur | 1528231 | 1528231 | 100.00 |

| | | | | |
|--|-------|---------|---------|-------|
| | Total | 8049481 | 5717763 | 54.12 |
|--|-------|---------|---------|-------|

8. **Reassess the impacts particularly number of NTH:** During the mission, it was observed that there were number of structures which were saved through design changes, etc. These changes had saved number of structures from displacement. It was informed that there were no structures which should be displaced totally; all will be incurring partial losses. The mission suggested that HPRIDC, with the assistance of NGO, to reassess closely and come out with the final number of structures and amount saved on account of realignment/design changes. The assessment has been going on and agreed to complete before end June 2013. HPRIDC would provide final number of structures saved (both TH and NTH) to the Bank before August 2013.

9. **Assessing and addressing the safety aspects of social utilities - junctions, schools, hospitals:** As agreed during the last mission, HPRIDC has initiated providing safety provisions at schools, hospitals, etc. The provisions largely relate to construction of boundary/safety walls at schools and providing safety signages. The mission during its visit noted the following: (i) at many schools, the safety signages are still to be provided; (ii) appropriate speed control barriers (rumble trips/speed breakers/others) at schools/hospitals are yet to be provided. Few locations where mission noted lack of safety measures such as safety signages and speed breaking/control systems are as follows (a) School in Package 10, Chainage 7.700 kms, village Tandol, (b) School in Package 3, village Patta chainage 74.270, and (c) School in Package 7, village Takhur Dwar, chainage 7.800kms. The Supervision Consultants should conduct safety audit particularly at schools and hospitals and design appropriate speed control barriers. It has been agreed that the HPRIDC with support of the Supervision Consultants would assess such locations in the project and design and provide customized safety provisions for safe passage of the children before end August 2013

10. **Others:** Mission noted couple of issues during its field visits: (a) At Dalwan village in Package 4, people have complained about closing of an existing old irrigation pipe line during the road works. It has been agreed that the HPRIDC will restore the irrigation pipeline before end July 2013. (b) In package 10 chainage 1.150 kms, an existing building developed severe cracks due to vibration effects caused by construction works and became unsafe for living in. The CSE has visited and recommended for compensation for the affected structure. It has been agreed that the HPRIDC will expedite the process and ensure payment of compensation for the structure damages before end June 2013.

11. **De-notify lands not utilised/acquired:** At few locations, land which was notified under Section 4 (1) and award declared was avoided from acquisition through design changes. From the discussions it was learnt that more such cases are there in Package 3. However, de-notification of these parcels of lands falling outside the CoI has not made any progress since last mission. It has been agreed that the HPRIDC would assess such properties avoided from acquisition and do the needful for de-notification from land acquisition or such measures that will enable the owners to do any transactions as they want. It has been agreed that the HPRIDC would complete its assessment and initiate legal process for de-notification before end June 2013.

12. **NGO services extension:** The services of NGO needs to be extended given ongoing land acquisition in Package 6 and additional land acquisition for proposed 1.2 kms bypass in Package 4. Following land acquisition, R&R activities such as micro plan preparation, assistance disbursement, etc, have to be completed for affected land losers. It is agreed that the HPRIDC will review the balance R&R activities and give the necessary extension to NGO services before end June 2013.

13. **Skill upgradation training:** Training activity has been progressing and has been completed for about 30% of the eligible and available PAPs. It is agreed that HPRIDC would complete the program

before end June 2013. Upon completion, the NGO would prepare a completion report and submit it to the Bank through HPRIDC before July 15, 2013.

14. **Missing data to provide:** Information relating to package wise land requirement, number of total titleholders, etc. has been provided. It is agreed that the HPRIDC will update the below table and will collect the missing information before end July 2013.

| Packages | Total Land (ha/are/sqmts) | | Number of villages | Number of Affected Titleholders (only land + only structures along with land) | Number of Affected Titleholders - only structures |
|----------|---------------------------|----------|--------------------|---|---|
| | Government | Private | | | |
| 1 | 4-11-00 | 15-21-55 | 35 | Under preparation | 255 |
| 2 | 12-90-20 | 27-65-00 | 54 | -do- | 431 |
| 3 | 3-05-00 | 22-49-69 | 59 | 5250 | 297 |
| 4 | 1-72-93 | 5-44-00 | 11 | 613 | 20 |
| 5 | 45-55-05 | 17-79-20 | 58 | 2661 | 25 |
| 6 | 2-95-00 | 1-16-89 | 37 | In process | 61 |
| 7 | 19-19-15 | 6-83-28 | 30 | 2276 | 46 |
| 8 | 40-91-76 | 7-74-91 | 20 | 597 | 1 |
| 9 | 14-05-98 | 1-07-02 | 7 | 348 | 0 |
| 10 | 12-09-56 | 9-32-94 | 30 | 3397 | 117 |
| Total | | | 124 | | 1253 |

Land Compensation Details

| Package No | Total Private Land (hectares/are/sqmts) | Total Compensation to be paid (Rs) | Total Compensation Disbursed till date (Rs) | Balance to disburse (Rs) |
|------------|---|------------------------------------|---|--------------------------|
| 1 | 15-21-55 | 266978383 | 24388106 | 26590277 |
| 2 | 27-65-00 | 3628440179 | 302386149 | 60418030 |
| 3 | 22-49-69 | 429432408 | 406956035 | 22476373 |
| 4 | 5-44-00 | 68290673 | 53119399 | 15171274 |
| 5 | 17-79-20 | 137134484 | 128974534 | 8159950 |
| 6 | 1-16-89 | 33671056 | 5561449 | 28109607 |
| 7 | 6-83-28 | 44447546 | 35298016 | 9149530 |
| 8 | 7-74-91 | 82241242 | 79652603 | 2588639 |
| 9 | 1-07-02 | 10032914 | 9573985 | 458929 |
| 10 | 9-32-94 | 63668002 | 54426670 | 9241332 |
| Total | | 1510167747 | 1307671291 | 202496456 |

Annex 9

Environmental Management and Safeguards

1. The focus of the mission was to review the over-all adequacy and quality of EMP implementation in the upgrading works under Phase I and II of the project. For this, the mission visited three out of the five contracts under Phase I and four out of the five contracts under Phase II. Out of the three packages (2, 5 and 6) which the mission did not visit, there are no activities that are under execution on contracts 5 and 6 as the works have been terminated. Apart from the site visits, the mission had detailed discussions with Contractors, Construction Supervision Consultant and officials from HPRIDC and CMUs on various environment management related activities.

2. The mission specifically reviewed in detail various activities on contracts 2, 3, 7 and 10 pertaining to closure of works and had extensive discussions on the proposed Bio-engineering Works Contract. Additionally, the mission reviewed the following: (a) progress on pre-construction activities such as tree cutting and relocation of water sources; (b) advancement on outstanding forest land diversion case/s that were identified during the earlier missions; (c) status and progress on bio-engineering works; (d) status of plantation/bio-engineering works on roads under the periodic maintenance component; (e) institutional arrangements for environment management activities under the project; (f) compensatory afforestation and; (g) disclosure of documents.

3. This annex presents the major observations/findings of the mission, the status with regard to agreements made during the previous mission/s and a summary of key actions agreed during this mission.

A. Over-view

4. On the whole, the implementation of Environment Management Plans (EMPs) was found to be 'satisfactory' despite the challenges posed by topographic and climatic conditions. Despite some initial gaps in EMP implementation, an over-all satisfactory progress with regard to environmental management has been observed.

5. The project has been able to address successfully and demonstrate good practices in dealing with key environmental issues faced during hill roads development. These include: (a) management and disposal of debris/spoils from hill cutting, including rehabilitation of such sites; (b) provision of protection measures (such as retaining walls and gabions) to avoid adverse impacts on private properties, forests, irrigation channels and water sources; (c) piloting of bio-engineering techniques for hill slope protection and the use of these techniques for stabilizing debris disposal sites; (d) protection of water sources/springs by adjustments in road alignment (such as in contracts 8, 2, 3 and 4); (e) restoration and provision of pucca pathways and stairs to provide access to residences, schools, health centers, temples and to connect other access roads; (f) savings of trees (such as in contract 1, 3, 7 and 10 and; (g) an over-all satisfactory clean-up/rehabilitation of work sites. While some provisions were made in the design itself, diligence and small adjustments by CSC during the construction stage has enabled saving of more number of properties. More so, such adjustments have helped in preserving road side trees that were initially proposed for cutting.

6. For management of debris disposal areas, as per site conditions, various treatments (small concrete walls/crate walls/terracing/stone barriers/bio-engineering works) have been applied to rehabilitate the debris disposal sites. Several of these dumping sites have been converted for productive usage such as farm land, floriculture, playground, orchard, bus-stop, plantation areas, valley view areas etc..

7. Under the project, technical specifications for bio-engineering works and nursery manual have been prepared; trial sites have been established and extended to works under the periodic maintenance component and bio-engineering plans/DPRs for up-grading works have been prepared. The HPPWD's

'Schedule of Rates' now covers bio-engineering items as well. In this light, the introduction of bio-engineering is a good practical example of the Bank's aim of helping the GoHP in the stabilization of unstable slopes.

8. The required regulatory clearances for forest land diversion and permissions for tree cutting, operation of construction camps, plant sites and borrow areas (as applicable in the sub-project context) have been obtained. Compensatory afforestation activities have also been initiated. More so, the HPRIDC headquarters, two divisions of National Highways, three CMU units and the Finance Wing of HPRIDC have obtained ISO 9001 (Quality Management System) and ISO 14001 (Environment Management System) certification, which is currently valid until August 2013.

B. Upgrading Works – Phase I and II

9. Under Component 1 (Core Network Upgrading), the project envisages upgrading of 447 km of roads in the Core Road Network (CRN) of the state. The mission assessed the adequacy and quality of EMP implementation in the on-going and completed works under this component through site visits, discussions with the concerned officials/ representatives and review of progress reports. As a part of this assessment, the status and progress on actions agreed during the previous mission/s was also reviewed. Specific attention was given to the review of the following aspects:

- a) Camp and plant management, including renewal of necessary regulatory permissions/consents from the State Pollution Control Boards, pollution control measures and over-all house-such sites
- b) Management of debris from hill cutting, including their disposal at pre-identified/approved locations and their rehabilitation, where the works have been completed or are nearing completion.
- c) Clean-up of work sites (along the road and at culvert/bridge construction sites)
- d) Borrow area operation and rehabilitation (in case of Contract 1)
- e) Drainage - both permanent and temporary drainage arrangements
- f) Measures to control scouring/erosion
- g) Worksite safety management, including traffic safety and worker's safety measures
- h) Safety measures, particularly around sensitive receptors such as schools and health facilities and
- i) Implementation of measures provided in the Biodiversity Management Plan.

Key Issues/Activities that Need Attention

10. Contract packages 5 and 6 stand terminated due to poor physical progress and the physical progress is extremely slow on contracts 1 and 9. Contracts 7 and 10 stand completed and the Defect Liability Period (DLP), which was coming to a close in June 2013 has been extended for another six months by the Engineer. On Contract 8, the DLP for the initial milestones will be over by December 2013. Since the various contracts are in different stages of the work cycle, it is imperative for the Nodal Environmental and Bio-engineering Officers in HPRIDC and in the CSC's team to maintain focus on priority activities and follow-up on key actions accordingly.

11. While the over-all the implementation of EMPs is rated 'satisfactory', there are a few actions/activities that need attention. These include:

- a) Complete the rehabilitation of debris disposal sites, including grading, plantation and bio-engineering works, provision of additional gabions and toe walls (on the road side where debris dumps are higher than road level) – the CSC must ensure that appropriate contractual remedies are applied well in time, to complete the rehabilitation works satisfactorily in line

with EMP requirements before substantial completion certificate is issued and the section/milestone is taken-over. Immediate attention is required on Contracts 7, 8 and 10 where the DLP will be over in the near future.

- b) Ensure clearance of waterways before monsoon (at all culvert/bridge construction sites; debris disposal sites) and maintaining of appropriate grade to ease out water – also provide catch pits and other protection measures, as per site requirements to prevent scouring/erosion
- c) Complete the provision/construction of remaining protection works, longitudinal drainage, catch pits and access roads – attention is required on Contracts 2, 3, 7, 8 and 10.
- d) Complete clearance of earth/stones/scarified bitumen from worksites (along main carriageway, culverts, bridge construction sites and haul roads)
- e) Undertake plantation works (shrubs/broadcasting of grass seeds) along the retaining walls where loose earth dumps (from foundation works) exist
- f) Ensure proper work site safety management on all contracts in accordance with contractual requirements, including enforcing of PPE discipline at all worksites (stone breaking; bar bending; hill cutting; bridge construction sites)
- g) Provision of signage in areas with wildlife movement
- h) Provision of safety measures (in addition to signage) near schools, health centers and other critical locations after a contract package-wise assessment/audit is carried out – CSC needs to prepare and submit the proposal to this effect to the Employer for approval.
- i) Improve the finishing of bus-stops
- j) Any outstanding work, even if it is minor in nature, must be clearly listed in the ‘punch list’ by the CSC at the time of taking-over the road.

12. The forthcoming rainy season offers a good opportunity to complete all plantation and bio-engineering related activities – this season is critical as henceforth some contracts will come to a close. In order to keep the over-all management of environmental aspects of the project on the desired track, the above mentioned activities need attention, particularly on contracts where works and/or the DLP is nearing completion. Regular participation of Environmental and Bio-engineering Officers in monthly/technical review meetings will help in improving the ‘results’ in a timely manner.

13. It was agreed that HPRIDC, CMUs and the CSC will closely follow-up on the said issues and ensure their satisfactory completion. A few other contract-package wise observations that were noted during site visits and need to be followed-up have been listed separately in Attachment 1 of this annex.

Additional Safeguard Assessment/Study for Contract Package 4 (Jahu-Kalkhar Road)

14. There has been a subsidence of the road for about 200 mts. in Contract 4 due to large scale failure of the mountain slope on which the project road runs. The HPRIDC and CSC have decided on a new alignment for about 1.3 km through a link road on the other side of the ridge. Design for this section has been prepared by the CSC and submitted to HPRIDC/CMU. The assessment of social and environmental impacts has to be assessed and mitigation measures as per the agreed framework and tools (EMP) need to be proposed. The said report, which was earlier expected by end of April, 2013 will now be made available to the Bank by June 30, 2013.

15. The mission briefly discussed the contents of the report with the Environmental Officers of HPRIDC and the CSC. It will include: (i) the reasons/need for the re-alignment; (ii) proposed design/alignment details; (iii) environmental impacts, including aspects such as hill cutting and debris disposal; (iv) forest land diversion, tree cutting, utility shifting requirements; (v) consultation with the

concerned stakeholders/local community and; (vi) the required environment management measures, including cost estimates.

C. Compensatory Afforestation

16. The mission during earlier visits had flagged the issue regarding the need to follow-up with the Forest Department for compensatory afforestation that had to be carried out in lieu of trees that have been cut to facilitate the widening and strengthening of roads under the Upgrading Component. The mission was pleased to note that the said activity has been taken-up for two roads, namely Ranital-Kotla (Contract 7) and Bhawarna-Lambagaon (Contract 10). The species planted include Khair, Shisham, Amla, Deodar, Jamun, Behra, Kachnar, Ritha, Banoak, Darek and Bamboo. More than 31,000 trees have been planted and a survival rate of nearly 70 percent has been achieved. The mission appreciated the role of the Executive Engineer, CMU, Kangra in pursuing the cases with the local DFOs for taking-up this activity. The mission was also informed that compensatory afforestation activity for Contract 9 is likely to be initiated during the coming monsoon. For the remaining cases, the information is still being collected.

D. Periodic Maintenance Works

17. As part of Component 2 (Core Network Maintenance and Management) of the project, periodic maintenance of 1463.6 km of roads has been taken-up under the project. The works have been undertaken in three tranches - 1, 2 and 3 each consisting of 532 km, 517.32 km, and 414.28 km of periodic maintenance work respectively. Of the total, construction of 1276 kms has been completed have been completed. All civil works under Tranche 1 and 2 have been completed, except one under the second tranche where plantation/ bio-engineering work is currently under progress. In Tranche 3, works have been completed in 227 kms and the rest are currently either under construction or under procurement. The mission reviewed the data on plantation/bio-engineering works for all the three tranches that was provided by HPRIDC. It was agreed that the staff of Horticulture Wing will monitor and help in improving the survival rate and update data records on the said activity. Based on the discussion and data review, the following actions were agreed with HPRIDC:

- a) The Horticulture Wing Official (working as Nodal Bio-engineering Officer with HPRIDC) to take-up regular site visits to guide and monitor the execution and maintenance of plantation/bio-engineering works under this component.
- b) Improve the quality of plant material (size of saplings) to improve the survival rate.
- c) Complete plantation/bio-engineering works on all roads during the coming monsoon except those works which are yet to be procured.
- d) Undertake fresh plantation in cases where very poor/poor survival rates have been recorded or where divisions have reported very high survival rates.
- e) Improve the documentation related to plantation/bio-engineering works in the periodic maintenance works – use the format that was shared/agreed earlier.

E. Bio-engineering Works

18. Bio-engineering provides one of the best ways to armor slopes against erosion and also contributes in retaining the productivity of hill slopes. It also helps in covering-up any unsightly scars that result from road widening activities. Under the project, technical specifications for bio-engineering works and nursery manual have been prepared and trial sites have been established and extended to works under the periodic maintenance component.

19. Apart from this, bio-engineering plans/DPRs for up-grading works were prepared way back in 2010. Funding for such works is being provided as part of the Additional Financing to help GoHP upscale the ‘pilots’ that were introduced in the original/parent project. The draft Bidding Document for the first such work is currently under preparation. There were extensive discussions on the scope of work,

technical specifications, bill of quantities, drawings and other associated aspects such as rate analysis, payment modalities, pre-qualification criteria and maintenance requirements.

20. The mission recommended that an Operations Manual should be prepared to maintain clarity on the preparation, execution and maintenance aspects of these works. The mission also recommended that once the draft is prepared, a joint review meeting should be organized, involving officials from HPRIDC (Project Director, Procurement Expert, Nodal Environment Officer, Nodal Bio-engineering Officer); active officials from CMUs, other divisions of PWD, Soil Conservation and Forest Department.

21. It was agreed that the first contract for bio-engineering works will be prepared for the two upgrading roads, namely Ranital-Kotla and Bhawarna-Lambagaon (Contracts 7 and 10). The draft Bidding Document will be shared for Bank's review by June 30, 2013. The second contract would possibly cover upgrading roads under Contracts 1, 2 and 3. Since this is the first such initiative, the draft bidding document for this contract will undergo a prior review. The Procurement Specialist from Bank reminded HPRIDC to include these proposed works in the Procurement Plan for the project.

F. Forestry Clearances and Tree Cutting

22. The required clearances for diversion of forest land and cutting of trees on 'forest' and 'other than forest land' have been obtained for all Phase I up-grading contracts. For Phase II up-grading works too, formal (final) approval from had been obtained for all forestry cases. However, one new case was identified in contract 6 last year, where a wasteland classified as forest also required forestry clearance. The requirement of diverting about 2.95 hectares (revised figure) of forest land is in milestone 3 and 4 (over a 4 km length between km 62 and 76) and is not affecting civil works as the contract has been terminated. The HPRIDC informed that the matter is being pursued and the formal (Stage II) clearance will be obtained by August 30, 2013. The contract package-wise status on forestry clearances for Phase I and II has been presented in Annex 14.

23. In the five roads under Phase I and another five contracts under Phase II of the project, almost all the trees have been cut, except in contract 6 where nearly 70 percent trees remain to be cut. In some contracts like 7, 9 and 10, a few trees (829 in number) initially proposed for cutting, have been saved. Infact, there is barely change in the last one year. A complete contract-package-wise update category-wise tree cutting update is available in *Annex 14*.

G. Institutional Arrangements for Environment Management

24. Contractors: Environment and safety officers (ESO) in the contractor's team are in place in all Contracts where civil works are in progress (not required in Contracts 7 and 10, where works are over and doesn't apply to Contracts 5 and 6, which stand terminated). However, deployment of qualified Environment and Safety Officers in the Contractor's team with proper resource support is required in case of Contracts 8 and 9, where these positions have remained vacant for a long time - immediate deployment is necessary and it was agreed that CSC will apply appropriate contractual remedies, in case the positions are not filled-in

25. Construction Supervision Consultant: The deployment of full time Environment Officer (EO) within the CSC's team, an issue that had been pending for a long time has been finally addressed by HPRIDC. The mission appreciated the role of the Project Director, HPRIDC in addressing this outstanding issue. One full time Environment Officer is currently in position and is actively participating in site inspections for improving the over-all environmental performance of the project. This deployment will enable regular supervision, monitoring and reporting on the implementation of EMPs on the upgrading contracts and should help in resolving issues in a more coordinated and timely manner.

26. Likewise, one full time junior Bio-engineering Specialist, with substantial years of field experience and one Senior Bio-engineering Specialist are in place now as part of the CSC's team set-up. This deployment was essential for HPRIDC to be able to update the Bio-engineering DPRs (prepared in-

house way back in 2010) and have them ready for bidding in the next month or two. The mission urged the Horticulture Wing officials to closely work with these experts to enable successful implementation of the bio-engineering related activities on the project.

27. The mission reminded that lack of adequate and trained man-power has its effects in terms of quality and timeliness of compliance on the ground and lapses of this kind should be avoided in future. The mission was assured by HPRIDC and the Engineer-in-Chief, PWD (part of the HPRIDC Board and the variation committee) that the man-month allocation for environmental over-sight (both for Environment Officer and for Bio-engineering Specialist) within the CSC's contract, which was quite low from the very beginning, will no longer be a stumbling block and the required expertise will be available on the project.

28. HPRIDC: The HPRIDC continues to have a Nodal Environment Officer as a part of its set-up, who co-ordinates with field staff on various environmental management issues. Likewise, the HPRIDC also has the Nodal Bio-engineering Officer in place to co-ordinate and facilitate activities pertaining to bio-engineering works.

H. Reporting/Documentation

29. The mission has been working with the HPRIDC and CSC to help structure the documentation on the various environmental aspects of the project. The information/data is being regularly updated by the CSC. The over-all quality of documentation is steadily improving. The mission discussed a few areas that need to be streamlined/strengthened – much of this pertains to plant site management, re-use of materials (such as stones), compensatory afforestation and work site safety management. It was agreed that the reporting on the said aspects will be detailed out in line with the discussions during the mission.

I. Capacity Building

30. Exposure visit/s for the Nodal Officers (Environment/Bio-engineering) of the HPRIDC along with some CMU staff engaged in the project to other projects, will help in strengthening technical knowledge and management capacity on technical and environment management aspects. For this, visit to Nepal and/or Austria, where challenges of working in hilly terrain are similar to those in Himachal Pradesh, could be explored. Nepal has created a Geo Environment and Social Unit (GESU) as part of the Department of Roads set-up, prepared and adopted an ESMF for all its operations and has good demonstration sites on bio-engineering through support of the Bank and other donor partners. Austria too offers good learning from bio-engineering and road development/management from tourism perspective. It was mentioned that if the state is interested, the mission could help organize such learning visit/s. The Project Director suggested dove-tailing of such efforts with support available under the PMGSY – Rural Roads project. It was agreed that the two projects will explore and plan for such exposure visits or learning events in the near future.

31. More so, the mission suggested that organization of a workshop to share the experience from HPSRP – both on the challenges and the several good practices that have started to emerge – will be useful in reaching out to a wider audience such as the PWD officials not working on the project; officials from Environment, Finance, Soil Conservation and Forest Departments and NGOs/CBOs. It will also present an opportunity to seek their reactions/suggestions on how some of the experience from the project could be mainstreamed/replicated elsewhere and how the systems developed under the project could be further strengthened. The workshop could also be used as a platform to release the manuals developed for the project. The HPRIDC was supportive of this idea and it was agreed that the Bank team and the PWD/HPRIDC will work closely to organize this event in the coming months.

J. Key Agreed Actions

32. The key activities/actions that require attention include the following:

Upgrading Works

- a) Complete the rehabilitation of debris disposal sites, including grading, plantation and bio-engineering works, provision of additional gabions and toe walls – with immediate attention on Contracts 7, 8 and 10 – Immediate.
- b) Ensure proper work site safety management on all contracts in accordance with contractual requirements, including enforcing of PPE discipline at all worksites - Continuous
- c) Provision of safety measures (in addition to signage) near schools, health centers and other critical locations after a contract package-wise assessment/audit is carried out.
- d) Complete contract-package wise actions/activities listed in the attachment of this annex.
- e) Obtain Forest Clearance for Contract 6 (identified last year) by September 30, 2013.
- f) HPRIDC/CMU to take necessary actions to prevent de-facing of bus-stops.
- g) Undertake assessment for the realigned section (1.3 km) in Contract 4 by June 30, 2013

Periodic Maintenance Component

- a) Complete plantation/bio-engineering works on all remaining periodic maintenance roads during the coming monsoon (except those works which are yet to be procured) by September 30, 2013.
- b) Undertake fresh plantation in cases where very poor/poor survival rates have been recorded by September 30, 2013.

Compensatory Afforestation and Bio-engineering Works

- a) Follow-up with Forest Department on Compensatory Afforestation activities
- b) Share the draft Bidding Document for the Bio-engineering works contract covering upgrading works on contracts 7 and 10 for Bank's review by June 30, 2013.

Annex 10

Financial Management

1. **Budget and Disbursements:** Against the budgetary provision of Rs. 326.73 crore for FY 2012-13, the actual expenditure incurred is Rs 187.31 crore. For the financial year 2013-14, Rs 338.82 crore has been provided for in the GoHP budget. As per the works planned for the financial year 2013-14, the budget provision is adequate. In the past imbalanced forecast has led to skewed disbursements i.e. release of huge advances in one quarter and only documentation in other quarters. Therefore, in this mission it was reiterated that the forecasted expenditure reported should be in line with the contractual payments committed to be made as per progress of the actual work on the field.
2. Disbursement from the World Bank as on May 19, 2013 for IBRD 48600 is USD 149.65 million which represents 68.03% of the loan of USD 220 million. The designated advance balance is USD 25.573 million. Disbursement under additional financing IBRD 81990, which became effective on March 8, 2013 is NIL.
3. **Asset Accounting:** Currently, the expenditure on upgradation and maintenance of the roads is classified as Capital Work In Progress in the balance sheet. In the long term road map for HPRIDC it was envisaged to entrust the completed roads to HPRIDC. However, a decision in this regard needs to be taken for capitalizing this expenditure in the books of HPRIDC. It was agreed with the project that an item in this respect will be included in the agenda of the Board meeting planned for the first quarter of financial year 2013-14 (around July 15, 2013).
4. **Staff Training:** As suggested in the previous mission the Finance Manager made field visits (Hamirpur, Dharmasala, Kumarhatti & Una) to address the training needs of CSC Engineers on financial and commercial aspects of the contract. Under the project there will be training conducted by the technical wing at Shimla office on the Long Term Performance Based Maintenance Contract (LTPBMC) methodology. It was suggested that the finance manager and his staff should participate in these trainings to familiarize themselves of the new terms and conditions under this new methodology of contracting.
5. **Internal Audit:** The internal audit reports for the half year ended March 31, 2012 and September 30, 2012 are yet to be tabled in the Board meeting for discussion. The project has yet not prepared an action taken report on these audit reports. The internal audit for half year ended March, 2013 is under progress. It was agreed that all the above actions will be completed by July 15, 2013. As agreed during the previous mission the contract of the existing internal auditor M/s. Soni & Rustogi, a Chartered Accountant firm based out of Shimla, will be further extended to cover the audit till the closure of the project by September 30, 2013.
6. **External Audit:** The submission of the audit report for FY 2011-12 was timely and there were no audit disallowances reported. For audit report for FY 12-13 the mission team emphasized the need for early finalization of accounts and its timely submission to auditors for their review and issuance of audit report. In case, it is anticipated that there will be any delay in submitting the project's audited financial statements to the Bank by September 30, 2013, the project was requested to advise Bank soon as possible so that the matter may be discussed and requisite assistance may be provided, wherever possible.
7. **Goods and Services Payments:**
 - **Supervision Consultant Payments:** The contract period of the supervision consultant contract has been extended till June 30, 2013. In the IUFRR review of Jan-Feb 2013 it was observed that the variation in this contract has exceeded 15%. It was informed to the project that Bank's no objection needs to be obtained to continue to claim the payments made under this contract as eligible expenditure in IUFRR.

- **Contractor's Payments:** In 67th Board meeting a variation committee was formed to which powers were delegated to approve variation in the contracts. Managing Director (Chairperson), Engineer in Chief (PWD), Chief Engineer cum Project Director and GM cum Financial Adviser are committees' member. The committee last met on March 16, 2013 to approve variations. The regularization of the variations in the contracts ensured that the payments can be made for the works done or services availed in variation to the original contract.
- **Processing Time on IPC:** For improving the efficiency in the time taken to process an IPC, a new process of submission of advance copy of IPC by the Supervision Consultant to finance wing has been introduced. As a result, the finance wing can simultaneously review the IPC and turnaround payments quickly on receipt of approval from the technical wing.
- **R& R cash compensation payments:** It was discussed with the Social Development Specialist of the Bank to check whether cash compensation is being paid as part of the R&R expenditure. In case, there are any such payments, then as per the Bank policy these cannot be considered as eligible expenditure for financing under the Bank loan.

8. **Mobilisation Advance:** As on May 19, 2013 mobilization advances of Rs 11.41 crore are still pending to be settled. The detail of these advances showed that it relates to only Package 5. The process of adjusting the mobilization advance against the running bills of the contractor is working satisfactorily.

Agreed Actions are as follows:

| Action | By When |
|--|-------------------|
| Include agenda in Board Meeting for taking decision on transfer of assets for capitalization. | July 15,2013 |
| Prepare action taken report for internal audit of half year ending March 31,2012 and September 30,2012 and share internal audit report for March 31,2013 | July 15,2013 |
| Appoint internal auditors for FY 2013-14 till closure of the project | September 30,2013 |
| No objection for variation more than 15% on supervision consultant contract. | June 30,2013 |
| Finance staff training on OPRC methodology | September 30,2013 |

Annex 11

Status of Upgrading Works

| Phase-I- Total Packages = 5 Nos. Total length= 231.8 km | | | | |
|---|------------------------|-----------------|---|--|
| Contract Package No. | Length (km) | Contract amount | Date of commencement/ Intended Completion Date | Present Status ending April, 2013 |
| 1 | 2 | Rs. Crore | 3 | 4 |
| Package-1 (ICB) | 44.82 [Now 44.7 km] | 126.50 | 08-05-2008 / 07-11-2010 [EoT up to 23 Nov 2012 approved by HPRIDC. EoT up to June 16, 2014 recommended by Engineer] | Sub Grade achieved = 43.6 km [GSB = 43.98 km; WMM = 43.93 km; DBM = 37.45 km] BC achieved = 9 km Pipe Culverts/slab culverts = 58 completed, 4 in progress [total = 62]; Box Culverts = 4 of 11 completed, 1 in progress rest of them not started ; 31 culverts retained Minor Bridge = 1 completed, 2 not started [total 3] Major Bridge = 3 completed, 4 in progress, 2 yet to start, [total 9] |
| Package -2 (ICB) | 45.00 | 97.95 | 14-05-2008 / 13-11-2010 [EoT up to 9 July 2012 approved by HPRIDC. EoT up to January 14, 2013 decided by DRB and under consideration of Arbitral Tribunal] [COMPLETED] | Earthwork achieved = 45 km Sub Grade achieved = 45 km [GSB = 45 km; WMM = 45 km; DBM = 45 km; BC = 45 km] Slab Culvert = All 26 completed, 64 retained/rehabilitated [total 90] Box Culvert = 32 completed [total 32] Pipe Culvert = 28 completed [total 28] Major Bridge = 1 completed [total 1] |

| Contract Package No. | Length (km) | Contract amount | Date of commencement/ Intended Completion Date | Present Status ending April, 2013 |
|-----------------------------|----------------------------|------------------------|---|--|
| | | | | Minor Bridge= 11 completed [total 11]; |
| Package-3 (ICB) | 45.80 [Now 46.03 km] | 102.82 | 14-05-2008 / 13-02-2011[EoT up to August 04, 2013 approved by HPRIDC] | Sub Grade achieved = 43.6 km GSB = 43.6 km; WMM = 43.6 km DBM = 43.6 km; BC = 43.36 km Pipe Culvert = 10 completed, 4 in progress [total 21] Slab Culvert = 47 completed, [total 47] Box Culvert = 6 completed, 1 in progress [total 10] Major Bridge = 3 completed, 1 in progress [total 4] Minor Bridge = 1 completed [total 1] |
| Package-4 (NCB) | 15.39 | 33.50 | 10-08-2008 / 09-02-2010 [EoT up to June 30, 2013 approved by HPRIDC] | Earthwork achieved = 14.9 km Sub Grade achieved = 14.81 km; GSB = 14.81 km; WMM = 14.81 km; DBM = 13.93 km, SDBC= 3.40 Km Pipe Culvert = 43 completed;2 in progress;1 to start [total 46] Slab Culvert = 12 completed; 1 to be started [total 13] |
| Package-5 (ICB) | 80.68 | 228.25 | 05-06-2008 / 04-06-2011 [EoT up to 31 Jan 2013 approved by HPRIDC] [TERMINATED] | Earthwork achieved = 46.5 km; Sub Grade achieved = 25 km; GSB = 16.6 km; WMM = 11.26 km; DBM = 7.5 km Culverts = 87 completed out of a total of 327. One is in progress. Minor Bridge= 3 started but now not in progress [total 14] |
| TOTAL | 231.8 | | | |

| Phase-II- Total Packages = 5 Nos. Total length= 203.14 km | | | | |
|---|--------------------|------------------------------------|--|---|
| Package No. | Length (km) | Contract Amount (Rs. Crore) | Date of commencement/ Intended Completion Date | Present Status ending April , 2013 |
| 1 | 2 | 3 | 4 | 5 |
| Package – 6 (ICB) Sarkaghat - Ghumarwin km 61.420 to km 103.370. | 41.95 | 93.86 | 15 August 2011 / 14 Feb 2014 [TERMINATED] | Excavation completed in 14.63 km. Pipe culvert = 17 completed, 5 not in progress now [67 total] Slab culvert = Not started [21 total]. Box culvert = Not started [15 total]. Minor Bridge = Not started [10 total]. Major Bridge = 1 not in progress now [total 1]. |
| Package –7 (ICB) Ranital-Kotla km 0.00 to km 39.17 | 39.17 | 62.25 | 8 March 2010 / 7 Sep 2011 [EoT up to 15 July 2012 approved by HPRIDC] | Completed. DLP in progress and the contractor has commenced and carrying out the recification and repair as per the snag list. |
| Package –8 (ICB) Kumarhatti-Sarahan-Nahan km 0.300 to km 72.035 | 71.74 | 142.22 | 26 Oct 2009 / 25 July 2012 [EoT up to March 29, 2014 approved by HPRIDC] | Earthwork = 71.54 km, Sub grade = 68.83 km, GSB = 68.48 km; WMM = 52.84 km; DBM = 52.40 km; SDBC =42.85/62.4 km; BC = 0.0/9.34km Pipe culvert = 342 completed, 3 in progress [total 346] Box culvert = 17 completed, 4 in progress [total 34] Slab Culvert = 57 completed, 0 in progress [total 72] |
| Package –9 (NCB) Draman-Sihunta km 0.00 to km 24.00 | 24.00 | 43.02 | 1 Dec 2009 / 31 May 2011 [EoT up to October 24, 2013 recommended by Engineer] | Earthwork = 22.31 km, Subgrade = 22.55 km, GSB =21.18 km; WMM = 14.08 km, DBM= 8.44 Km. Pipe culvert = 39 completed, 8 in progress [total 73] Slab Culvert = 30 completed, 1 in progress [total 32] Box Culvert = Nil |

| | | | | |
|--|---------------|---------------|--|--|
| Package –10 (ICB) | 26.28 | 56.07 | 8 March 2010 / | Completed. |
| Bhawarna-Lambagaon km 0.00 to km 26.280 | | | 7 Dec 2011 [EoT up to 17 Sep 2012 approved by HPRIDC] | DLP in progress and the contractor has commenced and carrying out the recification and repair as per the snag list. |
| TOTAL | 203.14 | 397.42 | | |

Annex 12

Status of Maintenance Works (Tranches I, II and III)

| Periodic Maintenance Works | | | | | | |
|--|----------------------|-------------------------------------|---------------|--|--|---|
| No. of Packages | Total length (in km) | Total Contract value in INR Million | Status of DPR | Procurement Status | Status of Work | Remarks |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Tranche-I | | | | | | |
| 25 Nos. (3 No. IFBs) | 532 | 408 | Completed | All works awarded | All works have been completed. | Total expenditure to date is Rs. 38.03 Crore. |
| Tranche-II | | | | | | |
| 27 Nos. (3 No. IFBs) MandiZone 8 HamirpurZone 3 Simla Zone 6 KangraZone 10 Total 27 No. Packages | 517.32 | 740 | Completed | All works awarded | All works are complete except one where bio-engineering work is in progress. | Total expenditure to date is Rs. 74.09 Crore. |
| Tranche-III | | | | | | |
| 20 Nos. MandiZone 7 HamirpurZone 1 Simla Zone 5 KangraZone 7 | 414.28 | 627 | Completed | Mostly (12) done. 4 in progress for length of 95 km. Bids to be invited for 4 contracts totaling to 88km | Works are complete in 231 km. | Total expenditure to date is Rs. 37.98Crore. |

Annex 13

Status of Consultancy Services

| Name of Consultancy Services | Status |
|--|--|
| 1. Construction Supervision for upgrading works | Construction Supervision Consultant is rendering the services. |
| 2. ISO 9001: 2000 Quality Assurance System (QMS) and ISO 14001:2004 Environmental Management System (EMS) Implementation | Consultant rendered the services. The certificates were issued in Sep 2010. |
| 3. Consultancy Services for Tunnels in Shimla and other parts of State. | Detailed Project Report (DPR) completed. Bid documents submitted by the consultant have been approved by Review committee. |
| 4. Proof Review of Design of Tunnels in Shimla & other parts of the State under Himachal Pradesh State Roads Project. | Final Report submitted by the consultant. |
| 5. Road Sector Finance Study | The Study is completed. The recommendations of the Study to set-up a 'Road Fund' is under active consideration of the Government. |
| 6. Road User Satisfaction Survey | The Road User Satisfaction Survey at baseline has been completed. The consultancy for carrying out RUSS at mid term has also been completed. |
| 7. Force account Productivity Study | This study is completed and recommendations are under consideration of the HP Government. |
| 8. Periodic survey for traffic and road asset monitoring on the core-road network. | Road inventory and condition data as well as traffic data is being collected by the PWD staff. |
| 9. Consultancy Services for Detailed Design of (Phase-I & II) upgrading works | Consultant has submitted Detailed Project Report (DPR) and Bid Documents including EIA/EMP and RAP for all Packages. |
| 10. Consultancy Services for Implementation of RAP by NGO | New NGO CRADLE engaged on dated July 17, 2009 for completion of remaining part of Services. Services are in progress. |
| 11. Consultancy Services for ICT | Not to be procured under HPSRP. This service is being procured by HPPWD through NIC, Simla. |
| 12. Independent Environment Review Consultancy Service | Consultant (Director, DCE Pvt. Ltd., Delhi) has completed services as per deliverables of the design consultant. |
| 13. Consultancy Services for Technical Examination of First two tranches of periodic maintenance works | The Services have been completed and presently the works are being supervised by the department. |
| 14. Consultancy Services for a Study to Short-List/Prioritize 20 Number Blackspots and Design Countermeasures on the Core Road Network under Black Spot Improvement Program (BIP) of HPSRP | The consultants have submitted all the reports. These are being reviewed by HPRIDC. Bidding documents are being prepared. |
| 15. Consultancy services for external evaluation of resettlement and rehabilitation | Consultancy services have been completed for evaluation at mid-term. |
| 16. Consultancy services for Road Accident Data Base Management System | RFP issued to Shortlisted Consultants. Proposals to be opened on June 14, 2013. |
| 17. Consultancy Services for Project Management System | RFP under preparation. |

Annex 14 - Appendix A

Forest Land Diversion/Trees Status in upgrading roads under Phase-I of the State Roads Project

Status of Forestry Clearances – Phase I

| Contract Package | Name of the Road | Chainage (Forest Case) | Area to be diverted (in ha.) | In-principle Approval | Amount Deposited | Formal Approval |
|-------------------------|---------------------------------------|--|-------------------------------------|------------------------------|-------------------------|------------------------|
| 1 | Mehatpur-Una-Amb (Km 5.600 to 50.426) | Km 5.600 to 31.300 | 11.31 | Obtained | Yes | Obtained |
| | | Km 5.600 to 31.300 (additional requirement) | 0.5020 | Obtained | Yes | Obtained |
| | | Km 31.300 to 50.300 | 3.80 | Obtained | Yes | Obtained |
| | | Km 31.300 to 50.300 (additional requirement) | 0.1420 | Obtained | Yes | Obtained |
| | Sub-total | - | 15.754 | Obtained | Yes | Obtained |
| 2 | Una-Barsar (Km 0 to 45) | Km 0 to 4 | 2.0 | Obtained | Yes | Obtained |
| | | Km 4 to 45 | 10.0885 | Obtained | Yes | Obtained |
| | | Km 4 to 45 (additional requirement) | 0.5800 | Obtained | Yes | Obtained |
| | Sub-total | - | 12.6685 | Obtained | Yes | Obtained |

| Contract Package | Name of the Road | Chainage (Forest Case) | Area to be diverted (in ha.) | In-principle Approval | Amount Deposited | Formal Approval |
|-------------------------|--------------------------------------|--------------------------------------|-------------------------------------|------------------------------|-------------------------|------------------------|
| 3 | Barsar-Jahu (Km 45 to 90.800) | Km 60 to 65 | 2.88 | Obtained | Yes | Obtained |
| 4 | Jahu-Kalkhar (Km 93.440 to 108.830) | Forest Area in 5 kms length | 1.79 | Obtained | Yes | Obtained |
| 5 | Theog-Kotkhai-Rohru (Km 0 to 80.600) | Km 10.470 to 29 | 0.4930 | Obtained | Yes | Obtained |
| | | Km 29 to 51 | 13.52 | Obtained | Yes | Obtained |
| | | Km 29 to 51 (additional requirement) | 7.11 | Obtained | Yes | Obtained |
| | | Km 55.500 to 56.700 | 1.9316 | Obtained | Yes | Obtained |
| | Sub-total | - | 23.0546 | | | |

Status of Forestry Clearances – Phase II Works

| Contract Package | Name of the Road | Chainage (Forest Case) | Area to be diverted (in ha.) | In-principle Approval | Amount Deposited | Formal Approval | Remarks |
|-------------------------|--|--------------------------------|-------------------------------------|------------------------------|-------------------------|------------------------|---|
| 6 | Sarkaghat-Ghumarwin (Km 61.420 to 103.370) | Km 61.950 to Km 76 | 2.36 | Obtained | - | - | Payment being done to Forerst department. |
| | | -do- | 0.59 | Yet to be received | | | Case submitted to HP Govt. by Forest deptt. |
| 7 | Ranital-Kotla (Km 0 to 39.173) | Km 6 to 14 and Km 24 to 39.173 | 1.7146 | Obtained | Yes | Obtained | - |
| | | Km 0 to 6 and Km 14 to 24 | 17.4769 | Obtained | Yes | Obtained | - |
| 8 | Kumarhatti-Nahan (Km 0.300 to 72.035) | Km 0.500 to 14.310 | 15.91 | Obtained | Yes | Obtained | - |
| | | Km 14.310 to 43.150 | 15.61 | Obtained | Yes | Obtained | - |

| Contract Package | Name of the Road | Chainage (Forest Case) | Area to be diverted (in ha.) | In-principle Approval | Amount Deposited | Formal Approval | Remarks |
|-------------------------|-------------------------------------|-------------------------------|-------------------------------------|------------------------------|-------------------------|------------------------|----------------|
| | | Km 43.150 to 72.035 | 18.129 | Obtained | Yes | Obtained | - |
| 9 | Draman-Sihunta (Km 0 to 24) | Km 0 to 14 | 1.212 | Obtained | Yes | Obtained | - |
| | | Km 14 to 24 | 12.8473 | Obtained | Yes | Obtained | - |
| 10 | Bhawarna-Lambagaon (Km 0 to 26.280) | Km 3 to 12 | 1.0 | Obtained | Yes | Obtained | - |
| | | Km 0 to 3 & Km 19 to 26.28 | 2.0956 | Obtained | Yes | Obtained | - |
| | | Km 12 to 19 | 9.0 | Obtained | Yes | Obtained | - |

Tree Cutting Status (as on January 31, 2013)

| Contract Package | Name of the Road | Trees to be Cut | | | | Trees Cut | | | | Balance Trees to be Cut | | | | |
|------------------|---------------------|-----------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|-------------------------|------------|--------------|-------------|------------|
| | | Forest Land | RoW | Private Land | Total | Forest Land | RoW | Private Land | Total | Forest Land | RoW | Private Land | Total | |
| | | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | % |
| Phase I | | | | | | | | | | | | | | |
| 1 | Mehatpur-Una-Amb | 3314 | 0 | 457 | 3771 | 3314 | 0 | 457 | 3771 | 0 | 0 | 0 | 0 | 0 |
| 2 | Una-Barsar | 2301 | 0 | 518 | 2819 | 2301 | 0 | 518 | 2819 | 0 | 0 | 0 | 0 | 0 |
| 3 | Barsar-Jahu | 447 | 1154 | 169 | 1770 | 447 | 1154 | 169 | 1770 | 0 | 0 | 0 | 0 | 0 |
| 4 | Jahu-Kalkhar | 70 | 512 | 0 | 582 | 70 | 512 | 0 | 582 | 0 | 0 | 0 | 0 | 0 |
| 5 | Theog-Kotkhai-Rohru | 3837 | 3848 | 0 | 7685 | 3822 | 3840 | 0 | 7662 | 15 | 8 | 0 | 23 | 0.3 |
| TOTAL | | 9969 | 5514 | 1144 | 16627 | 9954 | 5506 | 1144 | 16604 | 15 | 8 | 0 | 23 | 0.3 |
| Phase II | | | | | | | | | | | | | | |
| 6 | Sarkaghat-Ghumarwin | 249 | 1406 | 1304 | 2959 | 0 | 811 | 29 | 840 | 249 | 595 | 1275 | 2119 | 71.61 |
| 7 | Ranital-Kotla | 7694 | 551 | 405 | 8650 | 7446 | 551 | 405 | 8402 | 248* | 0 | 0 | 0 | 0 |
| 8 | Kumarhatti-Nahan | 30659 | 0 | 0 | 30659 | 30659 | 0 | 0 | 30659 | 0 | 0 | 0 | 0 | 0 |
| 9 | Draman-Sihunta | 3915 | 763 | 0 | 4678 | 3503 | 763 | 0 | 4266 | 412* | 0 | 0 | 0 | 0 |
| 10 | Bhawarna-Lambagaon | 2152 | 964 | 572 | 3688 | 1983 | 964 | 572 | 3519 | 169* | 0 | 0 | 0 | 0 |
| TOTAL | | 44669 | 3684 | 2281 | 50634 | 43591 | 3089 | 1006 | 47686 | 249 | 595 | 1275 | 2119 | 4.1 |

* Trees Saved – Cutting Not Required;

Annex 14 - Appendix-B

Utilities in respect of upgrading roads under Phase-I of HP State Roads Project

| S. no. | Contract Package | Mile Stone | Handing over Date | Status | | | |
|--------|---|---|-------------------|------------|------------|-------------------|--------------------------|
| | | | | IPH | | HPSEB | |
| | | | | Hand Pumps | Pipe Lines | Poles,HT/LT Lines | Transformers/ Substation |
| 1 | Package No- ICB-1 (Una-Amb from Kms 5+600 to Km 50+426) | 1-(Km 41+300 to Km 50+426) | May 08,2008 | √ | √ | √ | √ |
| | | 2- (Km 6+600 to Km 11+080)& (Km 33+200 to Km 41+300) | August 07,2008 | √ | √ | √ | - |
| | | 3-(Km 5+600 to Km 6+600)& (Km 11+080 to Km 33+200) | February 07,2009 | √ | √ | √ | - |
| 2 | Package No- ICB-2 (Una-Barsar from Kms 0+000 to Km 45+000) | 1- (Km 2+000 to Km 11+000) | May 14,2008 | √ | √ | √ | √ |
| | | 2- (Km 25+000 to Km 35+000) | November 13,2008 | √ | √ | √ | - |
| | | 3- (Km 0+000 to Km 2+000 & Km 11+000 to Km 25+000) | February 13,2009 | √ | √ | √ | - |
| | | 4- (Km 35+000 to Km 45+000) | May 13,2009 | √ | √ | √ | - |
| 3 | Package No- ICB-3 (Barsar- Jahu from Kms 45+000 to Km 90+800) | 1- (Km 51+000 to Km 65+000) | May 14, 2008 | √ | √ | √ | √ |
| | | 2- (Km45+000 to Km51+000 & Km65+000 to Km 67+250 | November 13, 2008 | √ | √ | √ | _____ |
| | | 3- (Km 67+250 to 73+000 & Km 79+000 to Km 88+000) | February 13, 2009 | √ | √ | √ | _____ |
| | | 4- (Km73+00 to 79+000 & Km 88+000 to Km 90+800) | May 13, 2009 | √ | √ | √ | √ |
| 4 | Package No- NCB-4 (Jahu- Kalkhar from | 1- (Km 96+200 to Km 101+800) | August 10, 2008 | √ | √ | √ | √ |

| | | | | | | | |
|---|---|--|--------------------|---|--|---|--|
| | Kms 93+440 to Km 108+830) | 2- (Km 93+440 to Km 96+200 & Km 101+800 to Km 108+830) | November 09, 2008 | √ | √ | √ | - |
| 5 | Package No- ICB-5 (Theog-Rohru from Kms 0+000 to Km 80+600) | 1- (Km 20+000 to Km 30+000 & Km 53+000 to K 68+000 Modified to Km 5+000 to Km 17+000 & Km18+000 to Km 31+000 | June 05, 2008 | √ | Total=1570 m. Shifted= 1160 m Balance= 410 m | Total=40 Nos. Shifted=37 Nos. Balance=3 Nos. | Total=1 Shifted=Nil Balance=1 |
| | | 2- (Km 35+000 to Km 45+000 & Km 68+000 to Km 80+600) Modified to Km 45+000 to Km 67+684 | February 04, 2009 | √ | Total=2475 m. Shifted=2305 m Balance=170 m | Total=35 Nos. Shifted=35 Nos. Balance=Nil | Total=4 Nos. Shifted=Nil Balance=4 |
| | | 3- (Km 30+000 to Km 35+000 & Km 45+000 to Km 53+000) Modified to Km 0+000 to 5+000 & Km67+684 to Km 75+684 | June 04, 2009 | √ | Total=1620 m. Shifted=1080 m Balance=540 m | Total=16 Nos. Shifted=12 Nos. Balance=4 Nos. | Total=1 Shifted=Nil Balance=1 |
| | | 4- (Km 0+000 to Km 20+000) Modified to Km 17+000 to 18+000, Km 31+000 to Km 45+000 & Km 75+684 to Km 80+684. | September 04, 2009 | √ | Total=4965 m. Shifted=3005 m Balance=1960 m | Total=54 Nos. Shifted=44 Nos. Balance=10 Nos. | _____ |

Utilities in respect of Upgrading roads under Phase-II of HP State Roads Project

| S.N | Contract Package | Mile Stone | Handing over Date | Status | | | |
|-------|--|--|-------------------|---|---|---|--------------------------|
| | | | | IPH | | HPSEB | |
| | | | | Hand Pumps | Pipe Lines | Poles,HT/LT Lines | Transformers/ Substation |
| 6 | ICB-6: Widening & Strengthening of Sarkaghat-Ghumarwin road Km 61.420 to Km 103.370. Length= 41.950 (Km) | 1- (Km 91+000 to Km 103+370) | 15-07-2011 | Total = 4 Nos. Shifted= Nil Balance= 4 Nos. | √ | √ | _____ |
| | | 2- (Km 76+000 to Km 85+000) | 20-12-2011 | Total = 8 Nos. Shifted= Nil Balance= 8 Nos. | Total = 15862 m Shifted= 12000 m Balance=3862 m | Total = 43 Nos. Shifted= 37 Nos. Balance= 6 Nos. | _____ |
| | | 3- (Km 70+000 to Km 76+000 & Km 85+000 to Km 91+000) | 21-04-2012 | Total = 9 Nos. Shifted= Nil Balance= 9 Nos. | Total = 10624 m Shifted= 0 m Balance=10624 m | Total = 53 Nos. Shifted= 40 Nos. Balance= 13 Nos. | _____ |
| | | 4- (Km 61+420 to Km 70+000) | 21-04-2012 | Total = 8 Nos. Shifted= Nil Balance= 8 Nos. | Total = 5481 m Shifted= 0 m Balance= 5481 m | Total = 57 Nos. Shifted= 0 Nos. Balance= 57 Nos. | _____ |
| 7 | ICB-7: Widening & Strengthening of Ranital-Kotla road Km 0.00 to km 39.173 Length= 39.173 (Km) | 1- (Km 6+000 to Km 14+000 & Km 24+000 to Km 39+173) | March 08, 2010. | √ | √ | √ | √ |
| | | 2- (Km 0+000 to Km 6+000 & Km 14+000 to Km 24+000) | July 07, 2010. | √ | √ | √ | _____ |
| S.No. | Contract Package | Mile Stone | Handing over Date | Status | | | |
| | | | | IPH | | HPSEB | |
| | | | | Hand Pumps | Pipe Lines | Poles,HT/LT Lines | Transformers/ Substation |
| 8 | ICB-8: Widening & Strengthening of Kumarhatti-Sarahan-Nahan road Km 0.300 to Km 72.035 | 1- (Km 0+300 to Km 10+800) | October 14, 2009 | √ | √ | √ | √ |

| | | | | | | | |
|----|---|--|---------------------|---|---|---|---|
| | Length= 71.735(Km) | 2- (Km 10+800 to Km 29+340) | April 13, 2010 | √ | √ | √ | √ |
| | | 3- (Km 29+340 to Km 54+340) | July 13, 2010 | √ | √ | √ | √ |
| | | 4- (Km 54+340 to Km 72+040) | October 13, 2010 | √ | √ | √ | √ |
| 9 | NCB-9: Widening & Strengthening of Draman-Sihunta road Km 0.00 to km 24.00 Length= 24.000 (Km) | 1- (Km 0+000 to Km 14+000) | November 20, 2009 | √ | √ | √ | √ |
| | | 2- (Km 14+000 to Km 24+000) | March 20, 2010. | √ | √ | √ | √ |
| 10 | ICB-10: Widening & Strengthening of Bhawarna-Lambagaon Road Km 0.00 to km 26.280 Length= 26.280 (Km) | 1- (Km 3+000 to Km 12+000) | March 08, 2010. | √ | √ | √ | √ |
| | | 2- (Km 0+000 to Km 3+000 & Km 19+000 to Km 26+280) | September 07, 2010. | √ | √ | √ | √ |
| | | 3- (Km 12+000 to Km 19+000) | December 07, 2010. | √ | √ | √ | √ |

Annex 14 - Appendix – C

Land Acquisition in respect of Upgrading roads under Phase-I of HP State Roads Project

| S.N | Contract Package | Mile Stone | Handing over Date | Status |
|-----|---|--|-------------------|--|
| 1 | Package No- ICB-1 (Una-Amb from Kms 5+600 to Km 50+426) | 1- (Km 41+300 to Km 50+426) | May 08,2008 | Compensation disbursed in all 6 villages |
| | | 2- (Km 5+600 to Km 18+180) | August 07,2008 | Compensation disbursed in all 10 villages |
| | | 3-(Km 18+180 to Km 41+300) | February 07,2009 | Compensation disbursed in all 19 villages |
| 2 | Package No- ICB-2 (Una-Barsar from Kms 0+000 to Km 45+000) | 1- (Km 2+000 to Km 11+000) | May 14,2008 | Compensation disbursed in all 7 villages. |
| | | 2- (Km 25+000 to Km 35+000) | November 13,2008 | Compensation disbursed in all 25 villages. |
| | | 3- (Km 0+000 to Km 2+000 & Km 11+000 to Km 25+000) | February 13,2009 | Compensation disbursed in all 11 villages. |
| | | 4- (Km 35+000 to Km 45+000) | May 13,2009 | All payments disbursed. |
| 3 | Package No- ICB-3 (Barsar- Jahu from Kms 45+000 to Km 90+800) | 1- (Km 51+000 to Km 65+000) | May 14, 2008 | Compensation disbursed in all 13 villages. |
| | | 2- (Km45+000 to Km51+000 & Km65+000 to Km 67+250) | November 13, 2008 | Compensation disbursed in all 10 villages |
| | | 3- (Km 67+250 to 73+000 & Km 79+000 to Km 88+000) | February 13,2009 | Compensation disbursed in all 29 villages |
| | | 4- (Km73+00 to 79+000 & Km 88+000 to Km 90+800) | May 13,2009 | Compensation disbursed in all 7vilages |

Annex 14 - Appendix-C

Land Acquisition Status in respect of Upgrading roads under Phase-I of HP State Roads Project

| S.N | Contract Package | Mile Stone | Handing over Date | Status |
|-----|---|--|-------------------|--|
| 4 | Package No- NCB-4 (Jahu- Kalkhar from Kms 93+440 to Km 108+830) | 1- (Km 96+200 to Km 101+800) | August 10,2008 | Compensation disbursed in all 5villages. |
| | | 2- (Km 93+440 to Km 96+200 & Km 101+800 to Km 108+830) | November 09,2008 | Compensation disbursed in all 6 villages. |
| 5 | Package No- ICB-5 (Theog-Rohru from Kms 0+000 to Km 80+600) | 1- (Km 20+000 to Km 30+000 & Km 53+000 to K 68+000 Modified to Km 5+000 to Km 17+000 & Km18+000 to Km 31+000) | June 05,2008 | Compensation disbursed in all 26 villages. |
| | | 2- (Km 35+000 to Km 45+000 & Km 68+000 to Km 80+600) Modified to Km 45+000 to Km 67+684 | February 04,2009 | Compensation disbursed in all 13 villages. |
| | | 3- (Km 30+000 to Km 35+000 & Km 45+000 to Km 53+000) Modified to Km 0+000 to 5+000 & Km67+684 to Km 75+684 | June 04,2009 | Compensation disbursed in all 5 villages |
| | | 4- (Km 0+000 to Km 20+000) Modified to Km 17+000 to 18+000, Km 31+000 to Km 45+000 & Km 75+684 to Km 80+684. | September 04,2009 | Compensation disbursed in all 14 villages. |

Annex 14 - Appendix – D

Land Acquisition in respect of Upgrading roads under Phase-II of HP State Roads Project

| S.No. | Contract Package | Mile Stone | Handing over Date | Status |
|-------|---|--|--------------------|--|
| 1 | Package No- ICB-6 (Sarkaghat to Ghumarwin from Km 61.420 to Km 103.370) | 1-(Km 91+300 to Km 103.370) | 15-07-2011 | Disbursement made for all 4 villages |
| | | 2 (Km 76+000 to Km 85+000) | 20-12-2011 | Notification under section 4(1) issued for all 11 villages. Award announced, payment to be deposited with LAO for disbursement in 10 villages. |
| | | 3 (km 70 +000 to Km 76+000 and Km 85+000 to Km 91+000) | 21-04-2012 | Notification under section 4(1) issued for all 14 villages. DLC negotiations conducted. |
| | | 4 (Km 61+420 to Km 70+000) | 21-04-2012 | Notification under section 4(1) issued for 9villages. DLC negotiations conducted for 8 villages. |
| 2 | Package No - ICB 7 (Ranital to Kotla Road – From Km 0.000 to Km 39.173) | 1 (Km 6+000 to Km 14+000 and Km 24+000 to Km 39+173) | March 08, 2010 | Disbursement made in all 21 villages. |
| | | 2 (Km 0+000 to Km 6+000 and Km 14+000 to Km 24+000) | July 07, 2010 | Disbursement made in all 9 villages. |
| 3 | Package No – ICB 8 (Kumarhati – Sarahan – Nahar Road from Km 0.300 to Km 72+035) | 1 (Km 0+300 to Km 10+800) | October 14, 2009 | Disbursement made in all 4 villages. |
| | | 2 (Km 10+800 to Km 29+340) | April 13, 2010 | Compensation disbursed in all 5 villages. |
| | | 3 (Km 29+340 to Km 54+340) | July 13, 2010 | Compensation disbursed in all 10 villages. |
| | | 4 (Km 54+340 to Km 72+040) | October 13, 2010 | Compensation disbursed in all 3 villages. |
| S.N | Contract Package | Mile Stone | Handing over Date | Status |
| 4 | Package No. NCB 9 (Draman to Sihunta Road from Km 0.000 to 24.000) | 1 (Km 0+000 to Km 14+000) | November 20, 2009 | Compensation disbursed in all 7 villages. |
| | | 2 (Km 14+000 to Km 24+000) | March 20, 2010 | |
| 5 | Package No ICB 10 (Bhawarna to Lambagaon from Km 0.000 to Km 26.280) | 1 (km 3+000 to Km 12+000) | March 08, 2010 | Compensation disbursed in all 19 villages |
| | | 2 (Km 0+000 to Km 3+000 and from Km 19+000 to Km 26+280) | September 07, 2010 | Compensation disbursed in all 10 villages. |
| | | 3 (km 12+000 to Km 19+000) | December 07, 2010 | No private land to be acquired. Forest land transferred in 8 villages. |