

## ROAD SECTOR ROADMAP

| Indicator  | Baseline  | 2013   | 2014   | 2015   | 2016   | 2017   |
|--|---|--|--|--|--|--|
| <b>1. Improving trunk road network condition</b>   |   |  |  |  |  |  |
| 1. Allocation of fuel tax to YHAB per km of trunk road network   | CNY71,000/km in 2011  | At least CNY80,000/km allocated to YHAB from the fuel tax  | At least CNY90,000/km allocated to YHAB from the fuel tax  | At least CNY95,000/km allocated to YHAB from the fuel tax                                    | At least CNY110,000/km allocated to YHAB from the fuel tax   | At least CNY125,000/km allocated to YHAB from the fuel tax                                       |
| 2. Percentage of network receiving heavy or intermediate maintenance   | 0.5% in 2011 (1.4% in 2010)   | At least 1.5% of the YHAB network receives intermediate or heavy maintenance                     | At least 2% of the YHAB network receives intermediate or heavy maintenance                       | At least 2% of the YHAB network receives intermediate or heavy maintenance                   | At least 3% of the YHAB network receives intermediate or heavy maintenance   | At least 4% of the YHAB network receives intermediate or heavy maintenance                       |
| <b>2. Improving trunk road maintenance cost-efficiency</b>   |   |  |  |  |  |  |
| 3. Percentage of trunk road network included in annual condition survey  | 55% of network length in 2011   | Road condition survey in 2011 and 2012 covers at least 95% of network length                     | Road condition survey in 2013 and 2014 covers at least 95% of network length                     | Road condition survey in 2014 and 2015 covers at least 95% of network length                 | Road condition survey in 2015 and 2016 covers at least 95% of network length   | Road condition survey in 2016 and 2017 covers at least 95% of network length                     |
| 4. Percentage of intermediate and heavy maintenance works according to asset management planning                 | 0% of network length in 2011  | At least 50% of intermediate/heavy maintenance works in line with optimized maintenance strategy | At least 60% of intermediate/heavy maintenance works in line with optimized maintenance strategy | Road asset management system operational and staffed with skilled people                     | At least 70% of intermediate/heavy maintenance works in line with optimized maintenance strategy                     | At least 80% of intermediate/heavy maintenance works in line with optimized maintenance strategy |
| 5. Percentage of YHAB maintenance budget allocated to implementation   | 25% in 2011 (31% in 2010)   | At least 30% of YHAB maintenance budget allocated to maintenance implementation                  | At least 35% of YHAB maintenance budget allocated to maintenance implementation                  | At least 35% of YHAB maintenance budget allocated to maintenance implementation              | At least 40% of YHAB maintenance budget allocated to maintenance implementation                                      | At least 45% of YHAB maintenance budget allocated to maintenance implementation                  |
| 6. Number of kms per management and station staff member   | 5.4 km per manager/engineer/technician in 2011 and 2.3 km per station staff in 2011 |  | Ratio of station staff per km of network reduced to 1 for 2.5 km.                                | Ratio of manager/engineer/ technician per km of network reduced to 1 for 7 km.               | Ratio of station staff per km of network reduced to 1 for 2.7 km.  | Ratio of station staff per km of network reduced to 1 for 3 km.                                  |
| 7. Percentage of intermediate/heavy maintenance carried out through open bidding and performance-based contracts | No open bidding conducted<br><br>No performance-based maintenance                   | At least 10% of new intermediate/heavy maintenance works contracted out through open bidding     | At least 2 performance-based maintenance contracts awarded and ongoing                           | At least 20% of new intermediate/heavy maintenance works contracted out through open bidding | Comparative cost-efficiency of internal, outsourced, and performance-based maintenance delivery mechanisms evaluated |  |

| Indicator   | Baseline  | 2013  | 2014   | 2015   | 2016  | 2017  |
|---|---|---|--|--|---|---|
| <b>Improving trunk road safety and environmental sustainability</b> |   |   |  |  |   |   |
| 8. Environmental management indicators                              | No environmental practices in maintenance works | An environmental, social, and road safety unit with at least 1 full-time qualified environmental specialist is set up in YHAB | Environmental management process for project works fully compliant with OM requirements                      | Environmental management instruction covering environmental assessment, management planning and implementation covering all YHAB intermediate and heavy maintenance issued by YHAB | General and maintenance sections performance management framework revised to include environment and safety indicators      | All YHAB intermediate and heavy maintenance works fully compliant with environmental management instruction |
| 9. Road safety indicators   | No road safety practices in maintenance works   | An environmental, social and road safety unit with at least 1 full-time qualified road safety specialist is set up in YHAB    | Road safety management process and safety designs for all project works fully compliant with OM requirements | Road safety management instruction covering risk assessment, auditing, and design covering all YHAB intermediate and heavy maintenance issued by YHAB                              | An environmental, social and road safety unit with at least 2 full-time qualified road safety specialists is set up in YHAB | All YHAB intermediate and heavy maintenance works fully compliant with road safety management instruction   |

CNY = yuan, km = kilometer, YHAB = Yunnan Provincial Highway Administration Bureau.

Note: "intermediate" and "heavy" maintenance are direct translation here of PRC standard definitions, which are most convenient for monitoring purposes. Intermediate maintenance includes pavement periodic maintenance (overlays and seals). Heavy maintenance includes pavement reconstruction.

Source: Asian Development Bank.