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**Report for Austroads on  
PIARC Technical Committee Meeting and associated International Seminar  
February 14 – 18 2011, New Delhi, India**

***TC A.1 – Preserving the Environment***

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**PART A: Executive summary**

The PIARC Technical Committee A.1 – “Preserving the Environment” held its seventh meeting in New Delhi, India in February 2011. The Committee is part of PIARC’s “Sustainability of the Road Transport System” theme, which aims to:

*‘encourage the development of road transport policies and programmes that result in beneficial community outcomes for sustainable and safe mobility in economic, environmental and social terms, with special attention paid to energy issues and the mitigation of the impacts on climate from the road transport system’.*

The Committee responded to the 2008 - 2011 PIARC Strategic Plan by progressing work on three projects involving:

- Assessing national policies and strategies for reducing the impacts of the road transport system on climate change and policies and strategies for the adaptation of transport systems to climate change.
- Monitoring environmental impacts, especially investigating ways to evaluate the effectiveness of environmental mitigation measures and monitoring the overall performance of such measures.
- Investigating how alternative energy sources can be used or energy generated in the construction, maintenance and operation of road transport networks in order to reduce reliance on fossil fuels.

Time was spent preparing for the forthcoming World Road Congress by finalising the committee’s activity report, poster, working group reports and planning the congress session to be run by the committee.

***International Seminar on Reducing the Carbon Footprint of Road Construction***

The Committee meeting was held in conjunction with a three day PIARC International Seminar hosted by the Indian Roads Congress. The theme was reducing the carbon footprint of road construction. Papers were presented from Indian public and private sector delegates, TC A.1 members and speakers from the World Bank and International Road Federation.

***Key messages from the week included:***

- a) India is implementing a massive road construction programme (new highways and widening existing highways) led by central government. Transport is the fastest growing sector in the Indian economy; the government aims to have 20,000kms of highway under construction at any one time.
- b) Central government incentivises highway construction through tax exemptions for operators, encumbrance free land for construction and duty free construction equipment and materials.
- c) India has the second longest road network in the world (4.2 million kms) and road transport accounts for 70% of freight and 85% of passenger trips. The huge maintenance deficit is widely talked about and very visible.

- d) All highway development is financed through public private partnerships. Several different models are in use, including tolling and annuity. Japan and the World Bank are significant investors.
- e) The key environmental issue in highway development is forest clearance, as forests provide important water and soil resources for surrounding communities. Very limited air pollution monitoring is done, no noise monitoring was apparent.
- f) The World Bank is starting to expect funding applications for highway construction projects to contain quantification of GHG emissions from construction (and potentially operation), and explanations of GHG emission reduction strategies.
- g) Climate change is not openly disputed by Indian political leaders or public service managers, nor is the need to reduce anthropogenic emissions 'in *cost effective* ways'. A national plan for climate change mitigation and adaptation is in place.
- h) The contribution of transport to India's total GHG emissions is low (13%), mainly due to very low motor vehicle ownership. However, motor vehicle ownership is rising rapidly (200,000 more cars each month).
- i) Concerns about restricting mobility and thus development via expensive climate change policies means cost effective reductions in GHGs are most likely to come from the manufacturing and construction sectors rather than transportation.
- j) India is heavily reliant on fossil fuels and believes the most appropriate response to climate change lies in alternative energies and fuel standards. India has a dedicated Minister for Non Conventional Energy (a world first?).
- k) Carbon calculators currently available for road construction (eg. World Bank and International Road Federation) do not take whole of life costs into account well and can thus incentivise short term carbon reduction initiatives that might result in long term increases in carbon emissions. Taking a whole of life approach to emissions calculations is important and this is an area for further development.
- l) Pavement techniques and material options to reduce carbon emissions were discussed extensively. Discussion on managing travel demand was noticeably absent.
- m) New Delhi's urban road transport system is chaotic. Cars, buses, tractors, bikes, tuk-tuks, rickshaws, pedestrians of all ages, cows, horses and donkeys all share the roads in alarming proximity to each other. A horn is an essential piece of equipment and must be used all of the time to warn other road users of your presence! Roads are poorly formed, barely marked and not really maintained. Road rules appear to be suggestions and there was no evidence of enforcement. Despite the common rhetoric that "the chaos works", Delhi's sad road safety record suggests otherwise (fourteen people die every hour on New Delhi's roads, according to the India Times. One can only wonder how many fatalities are never reported, and what the real injury rate is.)
- n) In contrast, New Delhi boasts a smart, safe metro rail system above and below ground that offers a good, cheap method of transport and appears to be very well used. It even offers women only carriages! I never waited more than 5 minutes for a train, and travelled across Delhi each day to meetings.

## **PART B: Committee meeting overview**

### *Context and purpose*

The A.1 Technical Committee on “Preserving the Environment” (“the Committee”) is one of four committees in Strategic Theme A: “Sustainability of the road transport system”.

The overall purpose of the theme is to explore ways to increase the sustainability of current land transport infrastructure. Strategic Theme A brings together the priority issues for road administrations on the economic, environmental and social dimensions of sustainability. In line with PIARC’s objectives, this goal is to be pursued in the context of developed and developing countries.

### *Meeting purpose and participants*

The purpose of the three day meeting was to substantially complete the work programme for the 2008 – 2011 period and to prepare for the World Road Congress in September 2011.

Mr Simon Price from the UK chairs the Committee, I am the English-speaking Secretary and the French-speaking Secretary is Ms Agnes Jullien. The Committee comprises approximately 40 environmental and transport planning professionals from a range of organisations, including road administrations, government transportation departments, private consultancies and universities.

## **Emerging issues / learnings for Australasia**

Please refer Executive Summary above.

## **Dissemination**

The final working group reports will be relevant to Austroads Programs as they fulfil the requirement to integrate sustainability issues into their work programs, especially as they address climate change considerations and carbon reduction strategies.

## **Benefits from other associated activities**

The benefits of PIARC Committee involvement extend beyond the work undertaken in the Committee meetings. Significant benefits accrue from developing professional relationships with colleagues from other jurisdictions and exchanging information and ideas outside official fora. Drawing on the experiences of other agencies and experts is particularly helpful in the environmental context where many of the challenges facing Australasia are already being addressed internationally.

## **Conclusions**

The seventh meeting of TCA.1 and associated seminar with the Indian Roads Congress was informative and productive. New Delhi demonstrated how effective and efficient an urban passenger rail system can be, in stark contrast to the chaotic, dangerous road network.

Austroads involvement in Technical Committee A.1 has significant benefits for Austroads and the New Zealand Transport Agency by ensuring efforts are not duplicated and we keep up to date with emerging trends and practices.