

XXIVth WORLD ROAD CONGRESS

Mexico 2011, 26-30 September



“ROADS FOR A BETTER LIFE”

Call for Papers and PIARC Prizes 2011



The World Road Association (PIARC) is a non-political and non-profit making association, established in 1909 to promote international cooperation on issues related to roads and road transport. In 2010, PIARC has 118 member governments.

Since 1908, PIARC has organized a World Road Congress every four years. The aim of the Congress is to provide a forum for professionals from all over the world, in every facet of the development, management and operation of roads and road transport, in order to give them an understanding of the progress being achieved in different countries, to discuss current issues and the future challenges faced by the road sector, as well as share knowledge.

The XXIVth World Road Congress will be held in Mexico City, Mexico from 26-30 September 2011. It will include around 40 sessions, a large exhibition, technical visits and social activities.

CALL FOR PAPERS

For this XXIVth edition, PIARC is calling for individual contributions on selected topics in order to enrich and broaden the views and work of the PIARC Technical Committees.

Papers will be reviewed by the Technical Committees. Papers that are accepted will be published in the Congress proceedings, and will provide input into the Congress sessions. All authors of accepted papers will have the opportunity to present their paper at poster sessions. Some outstanding contributions will be selected for an oral presentation during the Congress.

INFORMATION FOR PROSPECTIVE AUTHORS

Content. All papers must be original work available to be released for publication. Material that has been previously published will not be accepted. Any reference of a political, commercial or advertising nature must be excluded from the papers. The indication of a brand name should be excluded in the title and in the abstract.

Languages. Abstracts should be submitted in one of the official languages of the Association, i.e. **English or French and preferably in both languages.**

Submission: Abstracts should be submitted using the on-line facility from the dedicated Congress web-site:

<http://www.aipcrmexico2011.org>

Length. The abstract should not exceed 400 words.

PIARC PRIZES 2011

By submitting a paper in response to the present call for papers you will automatically be entered in the PIARC Prizes competition and be in contention to win one of the **seven prizes**. The prize for the best paper in each of the following categories will be awarded by an international jury:

- > **Young professionals** (paper presented by authors less than 30 years of age);
- > **Developing countries** (paper presented by authors from countries of low income and lower-middle income economies according to the classification established by the World Bank in 2009);
- > **Best innovation** (Maurice Milne medal);
- > **Safety of road users and road workers;**
- > **Sustainable development;** and
- > Two prizes to outstanding papers addressing other issues.

For each paper selected for a prize, PIARC will pay the travel expenses (economy class), accommodation (hotel - intermediate category) and the registration fees to the Congress for one of the co-authors of the paper.

For more information about the competition, please refer to the Congress web-site:

<http://www.aipcrmexico2011.org>

CONTACT IN RELATION TO THE CALL FOR PAPERS

World Road Association (PIARC)
E-mail: mexico2011@piarc.org
Internet: www.piarc.org

Timeline

31 August 2010	Deadline for submission of abstracts
15 November 2010	Acceptance notification of abstracts
28 February 2011	Deadline for full papers
15 May 2011	Acceptance notification of full papers
26-30 September 2011	XXIV th World Road Congress (Mexico 2011)

TOPICS FOR THE CALL FOR INDIVIDUAL PAPERS

Individual contributions are solicited for the following topics exclusively - *papers that fall outside this scope will not be considered.*

1. Environmental Evaluation of Road Projects

Environment and economic appraisal approaches are available at the international level to inform the investment decisions on road projects. But approaches for post investment evaluation are less well developed. The environmental evaluation of roads has to take into account global as well as local effects in order to reflect the cost inferred by their setting-up in the crossed territories. According to the characteristics of territories, local issues will be of different natures.

Papers are invited which address the methods used to evaluate the environmental impacts of road projects.

2. Innovative Road Management Arrangements

In recent years, in an attempt to obtain more effective and efficient management from road systems, road agencies across the world have developed and introduced new and innovative methods for engaging the private sector in the management of road systems. These innovative methods cover all aspects, including financing, construction, maintenance and network operations.

Many of these innovative approaches have been in place for a sufficient period to enable the road agencies to assess the success of these approaches against the goals and targets that were instrumental in their development.

Papers are invited on these new and innovative road management arrangements, outlining the format of the arrangement and lessons learnt from their application.

3. Funding of Road Infrastructure

The global financial crisis weakened many economies, and whilst some governments have responded by increasing spending on the road system, this level of spending is unlikely to be sustained in the future.

Changes to existing and new sources of funding are therefore likely to be required if the road system is to be sustainable.

Papers are invited which discuss changes to existing funding sources and the introduction of new sources of funding, outlining the initiatives, challenges, governance and road user acceptance of these initiatives.

4. Shadow and Direct User Toll (PPP)

PPP roads are becoming increasingly popular. Many investors and most financiers favour those PPP's with very limited or nil traffic risk, i.e. with payment mechanisms based on road availability. In response, many road agencies have increased the use of PPP's; however this trend may prove to be unsustainable.

Given that tolled and, to a lesser extent, shadow toll roads transfer more risk away from the public sector it would be short-sighted to abandon shadow and direct tolling as payment mechanisms for PPP roads. However, the risk perception of investors and financiers needs to be addressed to produce a win-win outcome.

Papers are invited which discuss the mitigation of traffic and revenue risks for shadow and direct user toll PPP roads.

5. Economic Aspects of Mobility Pricing

Papers are invited which present case studies on existing or envisaged road pricing schemes around the world. The case studies should include a short description of the pricing scheme (type of scheme and date of introduction, reasons for establishing the scheme, the problems encountered, etc).

Case studies should identify the impacts that were considered when the pricing scheme was evaluated, the significance of those impacts and the evaluation methods used to determine the significance of the impacts, including impacts on:

- > the characteristics of mobility;
- > the environment;
- > accidents rates;
- > social inclusion and accessibility to services; and
- > equity and attitudes to road pricing.

6. New Approaches to Appraisal of Social Impacts of Road Projects

Papers are invited describing:

- > approaches used or promoted by international funding institutions;
- > advanced systematic approaches for ex-ante evaluation; and
- > case studies of ex-post assessments.

7. Sustainable Maintenance of Rural Roads

For many years, the sustainable maintenance of rural roads has been a relatively lower priority in attracting funding, despite the rural road network comprising a large proportion of the overall road network in many countries. This has resulted in significant deterioration in the condition of the rural road network, the loss of road assets in some instances, and a reduced level of service and accessibility to road users.

Papers are invited which present examples of alternative practices that have been adopted to achieve sustainable maintenance of rural roads.

8. Project Governance and Institutional Integrity

It is important that Road Administrations demonstrate integrity and good governance so that the interests and expectations of all parties can be met equitably and in an efficient and effective manner.

Papers are invited which present case studies focused on one or more of the following:

- > policies and measures on existing management systems that promote integrity as a core business value and which aim to prevent, identify and deal with the consequences of corruption;
- > governance arrangements for project and programme management which manage risk, promote efficient and effective decision making, and reduce the potential for corruption and other negative behaviours.

9. Capturing and Understanding Customer Needs

By engaging with customers, road organisations are able to develop a good understanding of their customers' needs and expectations. The delivery of products and services can be further adapted to key customer groups.

Papers are invited which focus on the challenges which road organisations face regarding customer segmentation and the use of customer input. Papers should include the principles, strategies and organisational measures used to develop and deploy approaches to customer segmentation.

10. Human Resources for the Future

Having the right levels of human resource, both in capability and capacity, is essential for the effective operation of road administrations, however there exist a number of challenges:

DEADLINE FOR SUBMISSION OF ABSTRACTS: 31 AUGUST 2010

- > understanding the supply and demand of skilled labour in delivering future road programs, including the need for succession planning;
- > attracting and retaining staff in Road Administrations;
- > influencing educational institutions' curriculum and how competency is assessed;
- > government requirements to increase efficiencies and deliver more results with reduced resources;
- > rapid changes in technology and job design; and
- > changes in the community's expectations of Road Administrations.

Papers are invited which focus on the human resource management challenges faced by organisations, and the strategies and measures currently used, or intended to be used, to address these challenges.

11. Management of Roads

Papers are invited which provide examples of implementation of innovative solutions in management of congested areas or management of road corridors for which results have been thoroughly evaluated. The papers should include the following:

- > an introduction of the context and the stakeholders;
- > the particular objectives that were pursued;
- > the project components, budget, dimension;
- > the main issues at stake (technical, institutional, organisational, etc);
- > the results obtained (positive and/or negative); and
- > the key factors that led to success and/or failure.

It should be noted that papers related specifically to the topic of managing strategic freight corridors should be submitted under the Call for Papers #13 relating to "Freight Transport".

12. Keeping Cities Moving

Papers are invited which present case studies in the area of improved mobility in urban areas. Papers are sought from three different perspectives:

- > strategies to balance the share of modes;
- > combined land use and transport infrastructure planning strategies; and
- > non-motorized and non-carbon emitting transport.

In particular, papers that address the following questions are encouraged:

- > What can road authorities do to encourage use of sustainable modes?
- > Inventive measures to overcome road space allocation challenges – what worked, what didn't?
- > What differences are there in schemes driven by financial, environmental or social outcomes and can they work together, is there an optimal trade-off?
- > What is the right balance between expansion and densification to accommodate urban growth, how to prevent under-controlled urban sprawl when opening new transport infrastructure?
- > What are the relevant tools of mobility for congested cities in developing countries?

13. Freight Transport

Papers are invited which address one of the following topics:

- > Management of international freight corridors. Case studies detailing good practice in management (including cross-border issues) especially in areas which include developing countries or countries with economies in transition.
- > Interfaces of freight transport on roads with other modes. Case studies detailing experiences in improving the efficiency of intermodal interfaces of freight transport.
- > Urban freight management schemes, both methodological issues and concrete evaluations of urban freight management measures.

14. Winter Service in Latin America

Papers are invited which discuss one or more of the following aspects of winter maintenance in Latin America:

- > Information systems, including two-way communication with road users,
- > Winter Service Management Systems,
- > Sustainability in winter maintenance; social (safety), environmental and economic (cost-benefit) aspects required to achieve 'sustainability';
- > Impacts of climate change (changes in winter severity) on winter services and on road infrastructure and actions as preventive measures,
- > Strategies for high mountain roads (policy and definition of the level of service, snow clearance of unsealed roads, devices to manage avalanches, etc).

15. Linear Settlements: the World-Wide Disaster for Road Safety

About 50% of crash victims are vulnerable road users, most of them in developing countries, even though the level of motorization there is much lower. This is mostly as a result of so-called linear settlements, where the lack of access control and wrong investment strategies for new roads has led to mixed functions of residential life with heavy and high speed traffic.

Papers are invited which focus on:

- > strategies to prevent such developments through regulations for land use and by strategic projects to stimulate development in more suitable locations;
- > the legal tools and competences of road administrations to enforce access control along highways;
- > the available tools of infrastructure to rectify such hazardous situations, especially for vulnerable road users.

16. Methods for Road Safety Impact Assessments

Most crucial road safety problems are already created in alignment planning and in the master plans e.g. for road networks, urban development and for all kinds of land use. Strategic Environmental Assessments (SEA) and Environmental Impact Assessments (EIA) are already implemented in most countries' planning procedures. However, road safety is still in competition with other private and public interests and values and is often a lower priority.

To date, there have not been many methods and standards available for assessing the performance and forecasting the safety effects of plans and projects.

Papers are invited which focus on:

- > examples of assessments carried out at the initial planning stage prior to the infrastructure project being approved; and
- > methods and criteria of such assessments.

17. Road Safety System Approach

To support the “safe system approach” for road safety from the perspective of safer road operations, papers are invited which address one or more of the following:

- > policy formulation and the institutional framework for road safety for nations or at a provincial level;
- > social marketing strategies: successes and lessons to learn;
- > pre and post evaluation of road safety interventions via effective and innovative methodologies; and
- > addressing the legal framework to facilitate road safety strategies.

18. The System Approach of Human Factors in Road Design and Operations

After decades of trial and error in adapting road user behaviour to the technical aspects of the road transport system, it is now time to adapt ‘Standards on Road Design and Operation to road users’ physiological and psychological abilities and limitations, given the nature of the interface between road users and the road space.

Papers are invited which discuss best practices that consider human factors in the development of standards relative to:

- > road geometric design;
- > road and traffic operation.

Papers should not focus on violations, such as drinking and driving and other kinds of misbehaviour.

19. Managing Operational Risk in the Road Sector

Papers are invited which discuss risk management and related techniques, both theoretical and practical, including the following:

- > introduction of risk and emergency management theory and techniques in the road sector;
- > best practices in risk management associated with natural and man-made disasters and climate change in the road sector;
- > best practices in contingency planning and emergency response to natural and man-made disasters in the road sector; and
- > social acceptance of risks and their perceptions in road-related activities.

20. Sustainable Approaches for Road Tunnels

Papers are invited which describe a systematic and sustainable approach to the life cycle of road tunnels and their systems (design, maintenance, operations, and rehabilitation):

- > sustainable design, in particular with respect to the reduction of the environmental impact and the maintenance cost, during the life cycle period;
- > sustainable maintenance and winter operations, in particular with respect to the mitigation of the environmental impact of cleaning products, de-icing material and drainage water treatment;
- > sustainable operations, in terms of energy consumption, in particular by the use of more efficient lighting, electronic signage, and ventilation systems; and
- > sustainable operations, in terms of atmospheric pollution, by the use of more environmentally friendly technologies such as the use of photo-catalytic filters for reducing the global NO_x production.

21. Adaptation of Road Pavements to Climate Change

Papers are invited which address the following topics:

- > Nature of climate change impacts on road pavements;

- > Policy implications, including ways to respond to the potential impacts of climate change, ways to deal with uncertainty and risks, and adaptation of design rules and specifications; and
- > Development and/or implementation of adaptation strategies and related practical solutions.

22. Innovation in Road Pavements

The introduction and fostering of innovation in transportation projects, whether in management methods or construction techniques, can produce considerable benefits when it comes to improving safety and reducing construction time and costs. The aim of technological progress is not simply to help reduce the direct costs of pavement maintenance and rehabilitation but also to contribute to sustainable development.

Papers are invited which focus on:

- > examples of innovative practices that demonstrate a reduction in energy consumption or reduction in green house gas emissions compared to conventional practices;
- > examples of practices and methods used by agencies to foster innovation;
- > sustainable design and construction practices that incorporate high percentages (>50 percent) of recycled material content; and
- > proven innovations to reduce user delay, cost of construction and maintenance.

Proposals should not promote any proprietary commercial product but should concentrate on the benefits, implementation, documented success and benefits of adopting of the innovation.

23. Road Bridges

Papers are invited which detail recent ideas, knowledge and experience relating to any of the following topics:

- > Inspection and assessment of the condition of road bridges;
- > Innovative maintenance/repair techniques;
- > Management of the bridge stock.

24. Innovations in the Treatment and Use of Marginal Local Materials

This topic is specifically aimed at the exploitation of natural materials, locally available on the site of a road project, but judged unacceptable in its existing state to comply with technical specifications for earthworks.

Papers are invited which detail experience in the use of the following materials (i.e. on road construction sites, trial sites etc):

- > materials that are changeable (i.e. materials for which the properties change with time) or friable;
- > materials with particular components (sulfates, sulfurs, organic matter, etc.);
- > materials that are very wet and/or very dry;
- > materials that are very clayey; and
- > uniform materials (single-sized), gap-graded or with an unstable structure.

25. Innovations in Construction and Maintenance of Unpaved Roads in Developing Countries

Papers are invited pertaining specifically to unpaved roads and which focus on the following:

- > the use of the technique HIMO (Labour Intensive Construction);
- > the improvement of natural local materials;
- > the development of new techniques for construction and maintenance.