



International Road Federation

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IRF was founded in 1948 to encourage better road and transportation systems worldwide. IRF is a non-profit, non-political service organisation which helps in the application of technology and management practices to produce the maximum economical and social return from national road investments. Some 500 governments, companies and associations around the world are members of IRF and provide financial support to the three offices in Geneva, Brussels and Washington DC. National and regional road associations around the world make up the Federation. IRF is an accredited transportation consultant to the United Nations, the Council of Europe, and the Organisation of American States, and works closely with other international institutions in the transportation field.

Science leads way at IRF Environment Conference

Jean Beauverd headed the scientific committee which helped set up the highly successful "Roads and the Environment" International Conference held in Geneva, Switzerland, on 5-6 February. Here, he discusses the road sector's environmental performance and how he viewed the debates and the outcome



Jean Beauverd headed the scientific committee which helped set up the Roads and the Environment Conference

Q: What made you become personally involved in this event?

A: Sustainable mobility is a very current topic receiving increasing attention. I therefore welcomed the initiative of the IRF to hold this first conference dedicated to Roads and Environment. As CEO of Colas Switzerland, an active member of the IRF, and President of the Association of Swiss Road and Transport Professionals (VSS) it was natural for me to become involved.

Q: Roads are often heavily criticised for their negative environmental effects, particularly in terms of emissions from road transport. Do you think the public perception of the road is objective?

A: In some respects yes, as there are continuing negative environmental effects associated with road transport, most notably CO2 emissions, noise pollution and road accidents. But people tend to take for granted - to forget - the positive social benefits of roads, such as providing access to services and offering individual mobility. They concentrate on the negative aspects. Most people are unaware of positive developments in the performance of vehicles and road infrastructure. At the conference, we had good evidence of advances such as the development of tyres and road surfaces to reduce noise pollution. Such examples are little known. Remaining challenges continue to attract attention.

Q: What are those remaining challenges for the road sector in improving its environmental performance, and for you as a contractor, delivering road infrastructure? What do you feel is your contribution to meeting them?

A: Despite significant progress in improving vehicles to reduce pollutants from engine emissions, CO2 remains perhaps the problem. New technology such as alternative fuels and fuel cells may provide future solutions. In the meantime, we as road infrastructure providers

must deliver roads which minimise vehicles' fuel consumption. Well maintained, high performance road surfaces, improved design of road networks and the use of technology to maximise fluidity on the network can all contribute to improved fuel efficiency.

Q: A key issue is congestion, which increases CO2 emissions. For this, governments must develop sensible policies for managing the use of transport networks during peak and non peak times. I emphasise the word 'transport', as such a policy must encompass all transport modes and take a holistic approach to the transport system, if it is to provide for current and future mobility needs.

A: We heard evidence at the conference (from the Stern Report) that road transport is 11% of the overall emissions problem. So - we must seek to become more than 11% of the solution! We heard of the possibilities of carbon trading. We heard that road transport could move towards carbon neutrality, through reforestation and carbon sinks. Road pricing is currently fashionable as a possibility for managing transport demand. But we must look at mobility pricing, encompassing all modes, and not simply road pricing.

Q: Much of the negative environmental impact flows from road use, rather than the road infrastructure itself. Do you think there is sufficient collaboration between the different road sector stakeholders: infrastructure providers, vehicle manufacturers and users?



Delegates at the conference

A: There is never enough collaboration. It is always possible to do more. Each group of stakeholders is developing solutions in their particular area of competence. This became very clear at the conference. The IRF itself provides a platform where all stakeholders can come together and share their complementary knowledge to provide joint solutions. As a leading delegate at the conference said, "There is no silver bullet, to solve our problems with one shot. There are several bullets. We should fire all of them."

Q: How did the conference contribute to the understanding of the road sector's efforts to address its environmental performance?

A: We had all the actors together,

from around the world, for the first time ever in one room. We looked at all aspects of roads and the environment - from network planning and the natural and human habitat, through road construction, individual mobility, congestion and pollution, road users, noise and "end-of-life" issues, to roads as places of cohabitation. We heard of best practices in all these areas. Many of the problems associated with roads and the environment can be resolved in a relatively short period and in view of the proportion of goods and people transported by road, it is essential that they are. We in the IRF are setting up a Working Group on the Environment which will hold a series of seminars, to study the topics I've mentioned - and more - in greater depth ■

... and science leads the way in Latin America

Dr. Carlos Chang-Albitres began his IRF Fellowship in 1997, attending Texas A & M University and obtained a Master's degree in Science. This, according to Chang, was a major milestone in his life and helped him grow substantially in his professional career. The Fellowship experience left such a lasting influence, Chang eagerly accepted his election as the IRF Fellows Alumni Association Regional Coordinator for Latin America.

"To serve as an IFFAA regional coordinator is an honor and a great privilege," said Chang. "I know first hand how the IRF can change the lives of people through the Fellowship Program and I hope to encourage IRF fellows, and IRF members to contribute to achieving the IRF's goal of having better roads for better living."

During Chang's career, he has



Dr. Carlos M. Chang-Albitres

worked in pavement design, highway construction and supervision, and research. Many international highway projects funded by the Inter American Development Bank (IDB) and the Japan Bank for International Cooperation

(JBIC) have benefited by the knowledge that Chang acquired as an IRF Fellow. He has also developed and taught graduate level courses and conducted several pavement research projects which have been recognised as outstanding achievements by colleagues. Chang has lectured graduate level courses at the National Engineering University in Lima, Perú, and is involved in the development of a Master Programme in Civil Engineering at the Catholic University in Paraguay and at the Ricardo Palma University in Perú.

Currently, Chang is working at the Texas Transportation Institute (TTI) as an associate transportation researcher, where his research focus is on highway materials, pavement evaluation, pavement management, asset management and knowledge management. Sharing knowledge has

been a consistent priority for Chang. He published a book, "Pavements: A Vision into the Future", which is an effort to summarise the lessons learned through his professional career.

"As an FHWA instructor for the international course "Pavement Management", I have observed the importance of sharing knowledge," said Chang. "In this sense, I feel that the IRF activities to support the exchange of highway technology and knowledge expertise through a worldwide network are remarkable."

Chang is currently serving at the Asphalt Ibero-Latin American Congress (CILA) steering committee as the US delegate since 2005, at the Peruvian Road Association national congress steering committee, at the Construction Management Institute consultative committee.



Black Sea Ring Highway pace heats up

The Black Sea countries are ready to sign up to an agreement establishing the Black Sea Ring Highway. This important decision was revealed at a meeting of the Transport Working Group of the Black Sea Economic Cooperation (BSEC) in Belgrade, Serbia on 12-13 March. The governments represented at the meeting were Armenia, Azerbaijan, Bulgaria, Greece, Moldova, Romania, Russian Federation, Serbia, Turkey and Ukraine. IRF's Tony Pearce briefed the Transport Working Group on preparations for the 1st Black Sea

The 2005 Beijing-Brussels Caravan organised by the IRU

Ring and 4th Silk Road conference that will take place in Istanbul on 14-16 May. All of the national delegations expressed their support for this IRF initiative and their intention to participate.

The formal signing of the Black Sea Ring Highway agreement will be done by the Foreign Ministers of the BSEC states in Belgrade on 19 April. This meeting will also witness the start of the Black Sea Ring Caravan organised by the International Road Transport Union (IRU). This will be a convoy of 12 trucks (from the 12 member states of the BSEC) to start from Belgrade

and drive the route of the Black Sea Ring Highway, terminating in Istanbul on 30 May. Preliminary results of the convoy will be available at the IRF Black Sea Ring and Silk Road Conference in Istanbul.

The caravan will be similar in style and organisation to the Beijing-Brussels Caravan organised by the IRU in 2005. In each country the caravan will publicise the Black Sea Ring Highway and the drivers will be involved in various official functions. A special promotional event will take place on 30 April at the Romanian/Moldovan border and on completion of the journey in Istanbul on 30 May at the headquarters of the BSEC Permanent Secretariat.

Last November IRF signed a memorandum of understanding with the BSEC organisation to assist the member states with various aspects of road policy, and the development of the Black Sea Ring Highway. The ring comprises more than 7,000km of major routes around the Black, Azov and Caspian Seas, linking Europe and central Asia.

The conference in Istanbul is expected to attract a large participation from the region, from central Asia and from IRF members. The meeting will open with a ministerial meeting chaired by former President of the Republic of Turkey, Süleyman Demirel.

Speakers from more than 30 countries are expected to cover the themes of linking the Black Sea network to the Silk Roads, road policy and quality, user needs assessment and financing priority projects. In addition national directors of highways will present their road development plans. Many of the countries of the region have put together substantial road programmes and are changing their legislation to make PPPs possible ■

IRF to hold Latin America Regional Seminar at Intertraffic North America

IRF will hold a Latin American Regional Seminar in conjunction with the Intertraffic North America show (8-11 October, 2007) at the Greater Fort Lauderdale (Florida) Convention Center. The IRF Conference will focus on roadway safety issues in Latin America and will include a business roundtable forum and an update on the Latin American MUTCD. All sessions of the IRF Conference will be held in Spanish.

"Road safety is a growing concern all over the world and Latin America is no exception," said Carlos Chang, Associate Transportation Researcher, Texas Transportation Institute (TTI) and IRF Fellows Alumni Association (IFAA) Regional Coordinator for Latin America. "The IRF Conference will serve as a great forum to focus on the current road safety

needs facing Latin America and to learn of current best practices to address these needs."

William F. Troxler Memorial Golf Tournament

The IRF also announced that the William F. Troxler Memorial Golf Tournament will be held on 8 October in conjunction with the IRF Conference and Intertraffic exhibition. This IRF annual golf tournament was memorialised in 2000 when long-time IRF member and golf tournament chairman William Troxler passed away. This year's tournament will bring together leaders of international road organisations to help raise funds for the International Road Educational Foundation (IREF).

Over the past 57 years, the IREF has provided educational grants to 1,166 young professionals from 113 countries that have chosen transportation as their career path.

Intertraffic North America, the continent's most comprehensive conference and exposition to bring together suppliers and customers for the transportation infrastructure, traffic management, traffic safety and parking industries, will be held 10-12 October. The event is being organised by IRF members ARTBA and Amsterdam RAI.

• For more information about IRF and the Latin America Regional Conference, please visit www.irfnews.org.

Indian road programme booming

It is raining highway projects in India. IRF member, the National Highways Authority of India (NHA), is launching a total of 175 BOT (build, operate, transfer) highway projects in the coming months. The projects, entailing a total investment of over €20 billion (US\$26.7 million), are likely to result in construction of over 18,000km of highways and expressways. This is part of the Indian Government's plan for investing €40 billion (\$53.5 billion) in highway projects by the end of March 2015.

The majority of projects will be implemented on the basis of public-private partnerships (PPPs), opening a huge investment opportunity for construction and engineering companies. To attract the investment required for the project NHA also plans to change the size of the individual BOT projects from 50-60km currently to an average of 200-300km. This was a strong recommendation of the IRF delegates during the business development mission in India in 2005. The average construction cost of highways in India is €1-3 million (\$1.3-4 billion) per kilometre.

The NHA is keen to attract foreign companies because there is a pool of less than 20 domestic firms competing for various projects. The authority also feels that Indian firms do not have enough financial and operational expertise to manage such large BOT projects on their own. Companies will have to arrange the equity required to qualify for these projects, which conservative estimates put at around €6 billion (\$8 billion) in total. That is almost four times the cumulative equity of all the construction companies listed on the Indian stock market.

The NHA plans to seek advice from consultants on the method best suited for Indian conditions to set up electronic toll collection systems, a central clearing house for the tolls collected, most appropriate technology, and best operating practices worldwide.

To ensure that users are able to pay tolls through a single smart card or on-board vehicle unit on all stretches of national highways technical and administrative interoperability needs to be set up. Technical interoperability would ensure that a smart card presented to pay the toll on any stretch of national highway is accepted by all smart card readers installed by

different road operators. Similarly, a vehicle attached with any on-board unit should be able to pay the toll at all national highway stretches. The new toll policy is being finalised and should increase the commercial viability of road projects.

The Indian Government has been selling the Indian infrastructure story to both domestic and foreign private capital companies for over the last few years. In the domestic arena, PPPs are being aggressively promoted, whilst internationally global roadshows have been conducted recently to attract capital from abroad. Up till now the PPP model has not really taken off in India, except in the road sector, and, to a lesser extent, for urban infrastructure. One problem is that the government intervention in the pricing of many infrastructure services continues upsetting the confidence of private investors.

The PPP route has been used mainly for small projects, exposing its limitation in the present context, with the government estimating that investments of around €300 billion (\$400 billion) are required in all forms of infrastructure: roads,

ports, power generation and transmission and airports, over the next five years.

Citigroup and the Infrastructure Development Finance Corporation (IDFC) have announced the setting up an infrastructure investment fund with an initial size of V4 billion (\$5.3 billion). Also the Government has set up the India Infrastructure Finance Company (IIFCL) which aims to fund projects with both equity and debt investments. The proposed fund will focus on large projects.

A Government committee headed by the Chairman of IDFC, Deepak Parekh, has recommended ways to mobilise long-term debt capital assisted by more legal clarity on quasi-equity classes of capital, considering that there are legal hurdles in raising such capital. Also, insurance companies and provident funds are expressing interest in enhancing their exposure to major infrastructure projects. It is quite likely that foreign private equity funds will also show interest in Indian infrastructure in the coming months ■

• (See also *Indian Highways* this issue).

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