Industry as a partner for sustainable development

Road Transport

International Road Transport Union (IRU)

Developed through a multi-stakeholder process facilitated by:

UNEP

This report is released by the International Road Transport Union (IRU) and the United Nations Environment Programme. Unless otherwise stated, all the interpretation and findings set forth in this publication are those of the International Road Transport Union (IRU).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the International Road Transport Union (IRU) or the United Nations Environment Programme concerning the legal status of any country, territory, city or area or of its authorities, or concerning delimitation of its frontiers or boundaries. The contents of this volume do not necessarily reflect the views or policies of the United Nations Environment Programme, nor does citing of trade names or commercial processes constitute endorsement.

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holders, provided acknowledgement of the source is made. The International Road Transport Union (IRU) and the United Nations Environment Programme would appreciate receiving a copy of any publication that uses this report as a source.

First published in the United Kingdom in 2002.

Copyright © 2002 International Road Transport Union and
United Nations Environment Programme

ISBN: 92-807-2192-3

Production

Design by Beacon Creative
+44 (0) 1825 768811
Printed by The Beacon Press using their *pure***print** environmental print technology that is both water and alcohol free. No film processing chemicals were used and 90% of the cleaning solvent was recycled.

The electricity was generated from renewable resources and vegetable based inks were used.
Registered to the environment management system ISO14001 (Certificate No. E.9586) and EMAS the Eco Management and Audit Scheme (registration no. UK-S-00011), and the printer holds FSC Chain of Custody certificate number SGS COC 0620. Over 85% of any waste associated with this product will be recycled.

Industry as a partner for sustainable development

Road Transport

A report prepared by:

International Road Transport Union (IRU)
Jens Hügel
Head – Economic & Environmental Affairs
3 rue de Varembé
CH-1211 Geneva
Switzerland
Tel: +41 22 918 2704
Fax: +41 22 918 27 41
E-mail: iru@iru.org,
Web site: http://www.iru.org

Disclaimer

In a multi-stakeholder consultation facilitated by the United Nations Environment Programme, a number of groups (including representatives from non-governmental organisations, labour unions, research institutes and national governments) provided comments on a preliminary draft of this report prepared by the International Road Transport Union (IRU). The report was then revised, benefiting from stakeholder perspectives and input. The views expressed in the report remain those of the authors, and do not necessarily reflect the views of the United Nations Environment Programme or the individuals and organisations that participated in the consultation. Exceptionally, the consultation process for this report was carried out via e-mail due to time constraints.

Contents

Foreword

It is now 30 years since representatives of 113 nations assembled in Stockholm in June 1972 for the inauguration of the United Nations (UN) Conference on the Human Environment. Stockholm was the beginning of 'a new journey of hope'. It placed the environment issue firmly on the global agenda and provided a political impetus.

Shortly after, it became clear that we are not able to solve the problems of modern and future societies by limiting ourselves to environmental issues. The new concept, first formulated by the Brundtland Commission in 1987, took environmental, social and economic aspects into consideration. This new concept, the sustainable development approach, laid the foundations for the Rio declaration at the 1992 Conference on Environment and Development in Rio de Janeiro. Adopted by all member governments of the UN it became the comprehensive blueprint for achieving sustainable development. Implementation depends on motivation and the road transport industry responded proactively with its:

Agenda for sustainable development

As called for in Agenda 21, the road transport industry, under the leadership of the International Road Transport Union (IRU), developed the IRU Charter for Sustainable Development, which was unanimously adopted by all IRU members at its World Congress in Budapest in 1996.

The proactive IRU Charter is a commitment by the entire road transport industry to drive towards sustainable development. To date, road transport is the only mode of transport, which has committed itself to this fundamental goal. Moreover, we believe in deeds not words, in driving towards sustainable development we developed in our industry-wide initiative 'Driving Towards Sustainable Development' the following three prerequisites:

1. Innovations: 'At the source' measures are the most efficient and cost effective measures for improving the environmental performance of road transport.
2. Incentives: Engagement of governments to reward implementation of 'best industry practice' by road transport operators.
3. Investments: Improved traffic flow is a sine qua non condition for sustainable development and requires more investment in road infrastructure.

Our *Guide to Sustainable Development* which was published 2000 helps to communicate to the public the vital role of road transport in modern society, and provides goals for implementing sustainable development at transport operator level.

In this context, I want to stress that none of this would have been possible without joint action by IRU and its member associations and the co-operation of governments and international authorities, including UN bodies such as the UN-ECE, but also the ECMT and the EU. Our gratitude goes to all those – politicians, senior civil servants and partners in trade and industry – who have supported us in this cause.

As we enter this new century, our intention is to continue 'working together for a better future!'

Paul Laeremans,
President of IRU

The International Road Transport Union (IRU), the United Nations and other international bodies

More goods and people are transported by road than by any other means. The work of the Inland Transport Committee of the United Nations Economic Commission for Europe (UNECE) serves to confirm the importance of efficient road transport for economic development, employment, trade and tourism. Since its inception in 1948, the IRU has worked continuously with the UNECE to ensure progress in the transport area.

While IRU has long enjoyed official UN observer status: 'Consultative Status B' from 1949, changed to 'Category II Status' in 1969, the close relationship between the two organisations is also underlined by the fact that, since 1953, the former has been mandated by the latter to manage on its behalf the TIR (Transport International Routier) system of customs guarantees designed to facilitate and boost international commerce.

IRU also enjoys close ties with other international bodies, including the Council of Europe, with which it has had consultative status with since 1959, and the European Conference of Ministers of Transport, founded in 1953. IRU started formal liaison with the European Economic Community in 1958 and has maintained a permanent delegation to the European Union in Brussels since 1972. A similar permanent delegation to the Commonwealth of Independent States in Moscow was established in 1998.

"IRU has raised awareness of these issues among members, policy-makers and the general public, its Charter for Sustainable Development signals its commitment to the declarations of the Rio Earth Summit." (Kofi Annan, 1998, in a letter on the occasion of the 50th Anniversary of IRU.)

Maurice Strong, Secretary General of the United Nations Earth Summit, Chairman of the Earth Council and Special Advisor to the UN Secretary-General at the IRU World Congress in 1996 points out:

'For me, the signing of the IRU Charter for Sustainable Development and the commitment of the road transport industry to sustainable development was one of the most important and encouraging events of the post-Rio period.'

Part 1: Executive summary

The International Road Transport Union (IRU) is an association of national road transport associations. As such, it represents the entire road transport industry worldwide, speaking for both carriers of passengers and of freight. It is the collective voice of operators of coaches, buses, taxis and trucks, from large transport fleets down to small family companies.

IRU represents the entire road transport industry worldwide, speaking for both carriers of passengers and of goods

IRU has local and global reach, with more than 150 member associations in more than 60 countries, which add know-how, experience, insight and political weight to IRU's worldwide network. IRU presents the road transport industry's views in all international bodies where decisions affecting its operations and prosperity are made. It therefore facilitates the legislative tasks of governments at national and international level.

Trade is vital for our well-being and road transport is an irreplaceable component of trade in all economies

Transport plays a key role in economic development. Efficient transport systems, both of people and goods, enable an economy to develop optimal allocation of scarce resources, thus maximising wealth. The road transport sector is well aware of this essential economic role and of its social responsibilities vis-à-vis road safety, labour conditions, the environment, energy savings and, consequently, sustainable development.

Gross Domestic Product (GDP) and growth in transport are mutually dependent

Despite the manifold social and economic benefits of transport, it must be borne in mind that the road transport industry holds an intermediary and service oriented position, following client's needs in response to logistical demands. As such, while the road transport industry is prepared to take all the measures necessary to effectively achieve sustainable development, its actions can be rendered futile if not accompanied by complementary actions by its industry partners, clients and governments. On the other hand, political and social preferences do not always comply with these market forces. When developing a policy strategy for transport and the environment, this 'sandwich' position of the sector in the economy should be kept in mind constantly.

Decoupling of growth in road transport from its environmental impact

Trends in almost all sectors of the economy will immediately affect the transport sector. In other words, a growth in the economy leads automatically to a growth in transport. It is not possible, other than in planned economies, to decouple economic growth and growth in road transport. However, and more importantly, it is possible to decouple growth in road transport from its environmental impact. The way thereto is paved by IRU's strategy for sustainable development.

Road transport is the only mode of transport that has committed itself to driving towards sustainable development

As called for in Agenda 21, the road transport industry, under the leadership of IRU, developed the IRU Charter for Sustainable Development, which was unanimously adopted by IRU Members at its World Congress in Budapest in 1996. The proactive IRU Charter is a commitment by the entire road transport industry to drive towards sustainable development.

IRU has a comprehensive strategy to implement sustainable development.

Box 1: IRU Agenda for Sustainable Development

- IRU Charter for Sustainable Development (1996)
- IRU Initiative 'Driving Towards Sustainable Development' (1997)
- IRU Guide to Sustainable Development (2000)
- IRU included the promotion of Sustainable Development into its constitution (2001)
- IRU Report on Best Industry Practices (2001)

The Charter was followed by the IRU initiative 'Driving Towards Sustainable Development', in which the following prerequisites for achieving sustainability were set out in detail:

- Innovation: 'At the source' measures are the most efficient and cost-effective measures for improving the environmental performance of road transport.
- Incentives: Engagement of governments to reward implementation of best industry practices and technology to expedite penetration.
- Infrastructure: Improved traffic flow is a sine qua non condition for sustainable development and requires more investment in road infrastructure.

In 2000, IRU published its *Guide to Sustainable Development*. The guide is designed to be a flexible model and practical aid for all national IRU member associations. They can choose from IRU guide those modules that will best contribute to the achievement of sustainable development in their particular situation. The objective of the guide is to encourage as many transport operators as possible to implement sustainable development practices.

IRU is one of a few international organisations that have made the promotion of sustainable development a constitutional obligation

The guide shows transport operators how to implement measures that will further improve safety, environmental performance, fuel efficiency and, consequently, road transport operators' profitability and quality of service.

Lower fuel consumption means not only reducing CO_2 and other emissions but, also lower fuel costs.

Improved safety means fewer accidents, more reliability and less vehicle downtime as well as lower insurance costs. Improved wastewater management can reduce a company's water bill significantly. So in other words, IRU has been able to demonstrate to the transport operators that sustainable development equals profitability for the road transport sector.

IRU has a standardised assessment and knowledge transfer system to promote sustainable development

The follow-up of the guide includes a standardised assessment on 'best industry practice' and a knowledge transfer via the IRU Academy. This shows that IRU and its global network of member associations have a comprehensive strategy for creating a win-win situation for both the environment and the economy.

As a continuous process, the road transport industry provided new vehicle technology and the transport operators financed it by purchasing new trucks and coaches. With this mutually dependent partnership road transport took the lead to achieve sustainable development and a lot of noteworthy successes can be shown.

Achievements over the last ten years

Polluting emissions reduced significantly:

- within the last decade, polluting gaseous emissions of heavy commercial vehicles such as nitrogen oxides (NOx), hydro

carbonates (HC), and particles matter, have been reduced up to 50% and will be reduced by further 50% over the next 15 years.

Energy consumption down:

- a heavy commercial vehicle of the year 2000 uses a third less fuel as compared with two decades ago. Expectations are that this trend will continue.

Noise levels dramatically lowered:

- the noise level of 28 heavy commercial vehicles built in 2000 is no higher than the noise caused by one heavy commercial vehicle built before 1970!

Accidents decreased:

- despite the increase in transport volumes, the accident rate of trucks has been reduced by over 63% compared with rate levels in the 1970s.

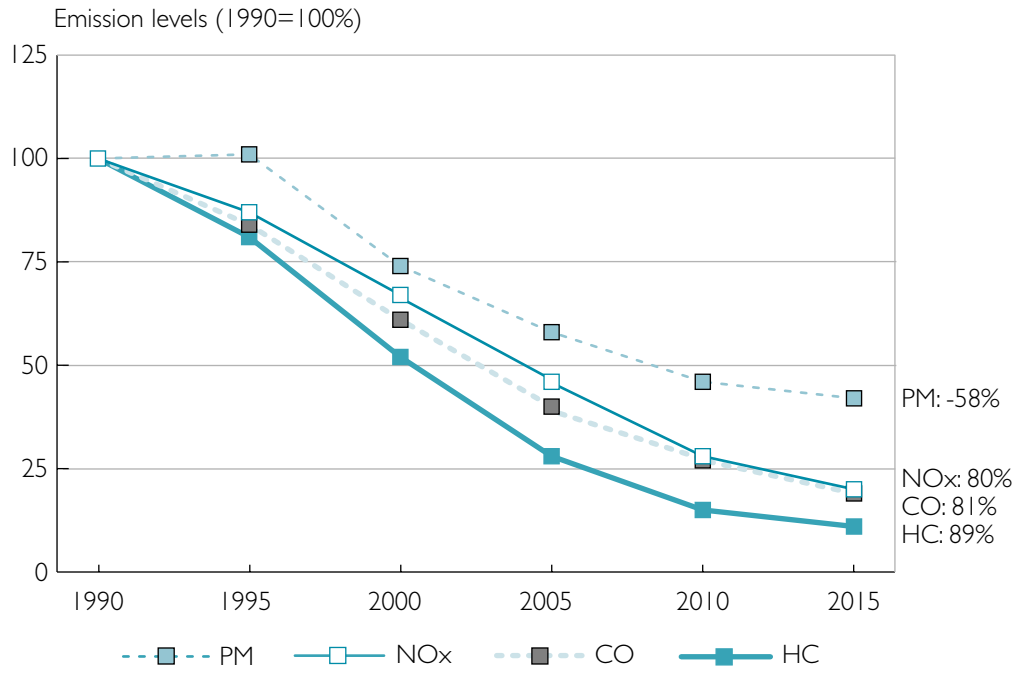
CO_2 emissions – the remaining challenge

Although the road transport industry has improved its environmental performance, the increase in CO_2 emissions remains a great challenge.

On 24 September 2001, the regional ministerial meeting for the World Summit on Sustainable Development agreed on the promotion of a shift from of goods from road to rail.

However, based on facts form the European Commission's white paper on a common transport policy, road transport would still need to handle 33% increase of goods over the next ten years, even if the railways could, which they cannot, double their capacity. Any policy based on modal shift will not address the real problems that need to be tackled, namely better use of existing infrastructure, clearing bottlenecks and closing missing links.

Box 2: Emissions 1990-2015 (EU15) road transport



Source: Auto Oil II

A shift from road to rail will not automatically reduce CO_2 emissions. Two independent research institutes in the Netherlands and in Germany have shown that only in some links is combined transport more environmentally friendly than pure road transport. Looking at the whole energy production chain, the study showed that combined transport is more environmentally friendly only where nuclear energy is used for energy production.

Working together for a better future – the human element

The three pillars of sustainable development, economic growth, social equity and environmental protection can only be achieved by cooperating with all involved partners. Since the Rio summit, IRU has been working closely with its members and politicians to drive towards sustainable development. In that context, IRU translated complex concepts into practical actions for its members, showing at every step that striving for sustainable development is a win-win situation.

IRU's awareness campaign on CNN shows innovative character of the road transport industry

An old idiom says 'do good things and talk about them'. IRU therefore launched five CNN spots in 1998 and 1999 as part of the road transport industry's ongoing campaign for improving public and politicians' awareness of road transport and its environmental performance. Complementing the TV campaign IRU produced brochures, screen savers, CD-Roms, cards and posters. Most of them dealt with sustainable development.

The greatest challenge remaining in satisfying the objective of the three pillars of sustainable development is to persuade governments to provide real business incentives to accelerate penetration of best industry practices and technology

It must be clear that working together for a better future is a continuous process and the time has come for an open dialogue between stakeholders, shareholders and the different transport modes to ensure the optimisation of the whole transport system. In that context IRU's proactive role and the integration of its members in the whole process can be a model for other modes of transport.

Part 2: The International Road Transport Union (IRU)

Speaking for the road transport industry

IRU is a confederation of national road transport associations. As such, it represents the entire road transport industry worldwide, speaking for both carriers of passengers and of freight. It is the collective voice of operators of coaches, buses, taxis and trucks, from large transport fleets down to small family companies.

IRU has local and global reach, with more than 150 member associations in more than 60 countries, which add know-how, experience, insight and political weight to the IRU's worldwide network. Furthermore the IRU campaigns for standardised road transport procedures and improved road networks to make it easier for people and goods to travel everywhere, including the huge distances between the western extremities of Europe and the heart of Asia.

IRU presents the road transport industry's views in all international bodies where decisions affecting its operations and prosperity are made. IRU advocacy closely follows developments in the European Union (EU) and the UN and its regional commissions. In view of the often-seminal nature of EU decisions governing road transport, the maintains its own permanent delegation in Brussels.

Last but not least, IRU is the international guarantor of the TIR carnet system under which trucks are sealed by customs upon departure and can cross several borders without further checks until they reach their final destination. The system, extending to 61 countries, is indispensable to international goods traffic. It reduces border delays and formalities and avoids the necessary unloading of goods at each border for inspection along with depositing large sums of money as customs guarantees.

Part 3: Industry and sustainable development aspects

Chapter 1: Economic aspects

The formulation of joint Worldbank-IMF Poverty Reduction Strategy Papers show that there cannot be economic growth without the availability of transport. The role of the economy has always been the creation and distribution of wealth. To attain that goal, it is indispensable to possess the means of transport, which will permit an intensification and internationalisation of the exchange of goods and services.

Trade is vital for our well-being and road transport is an irreplaceable component of trade in all economies

Within the transport sector, road transport's market share is the largest and is increasing due to its superior service, in term of greater flexibility, reliability, speed and lower probability of damage. The whole economy depends on road transport that can be further highlighted by the following enumeration:

- trucks carry nearly 80% of all goods in industrialised countries,
- everyday trucks deliver 70kg of goods for every person living in industrialised countries,
- trucks in Europe pay about 40 billion in taxes per year.

Looking at the role of the coach and buses in the economy it becomes clear that:

- buses and coaches are not only the backbone of public transport, but also play an important role in Europe's tourist industry. They help to provide employment for millions of citizens. From Lisbon to Moscow, from Istanbul to Stockholm, bus and coach operators employ about 1.8 million driver, mechanics, accountants, marketing experts, etc. Furthermore they also give work to the world's leading manufacturers, companies supplying vehicle components, to dealers and to other bus- or coach-related activities, such as inspection and insurance. In addition to that, another five million people in Europe earn their living in businesses that are strongly dependent on bus and coach services, such as travel agencies, hotels, restaurants, museums or the retail business.

Road transport helps to reduce poverty in developing countries

Road transport also plays an important role with respect to economic development in less developed countries. On the one hand, transport contributes to poverty reduction through its indirect impact on economic growth while on the other hand there is a direct impact on personal welfare of the poor. What exact impact road transport has on poverty reduction hinges on both the type of infrastructure and the kind of service provided by road transport. It also depends on the operating environment, particularly the market structure and government regulations.

Generally viewed, local access roads in poor rural and urban areas make only a modest contribution to national income growth, whereas they are likely to have a direct and significant impact on the daily life of the poor. On the other hand, inter-city transport is of strategic significance to a nation's economy. It stimulates and facilitates national income growth; the impacts on poverty are likely to be indirect but significant.

GDP and growth in transport are mutually dependent

Economic growth, rapidly expanding populations in developing countries and growing consumer demands expose developing countries to substantial supply and maintenance problems. On account of its

flexible organisation, road transport can provide an answer to the problem. As a consequence, innovations, incentives and infrastructure, have to be realised and integrated both in foreign affairs and in general development policy.

Sustainability = profitability
For IRU, sustainable development does not only mean economic growth and poverty reduction – it goes beyond profitability. Implementing our ideas and our Charter for Sustainable Development means added value for our members and for the environment.

The following table shows the importance for both the environment and the companies of the so-called modules exemplified which will be dealt with in more detail in Part 4:
In order to draw a first conclusion, it is important to remember that transport is a demand-led service and the structure of that demand is changing. E-commerce, 24-hour societies and globalisation have major implications for future transport demand given the fact that in an integrated process of production and distribution companies seek the most competitive solution possible.

They adapt or modify their strategy on a regular basis, which again requires adaptation of the transport industry. Only road transport offers such a large degree of flexibility both in developed and developing countries.

Box 3: IRU – Sustainability = profitability

IRU modules	Benefits for the environment	Benefits for the road transport operator
Driver training and Well Driven Campaigns	Less accidents Lower fuel consumption Less CO_2 emissions	Less vehicle downtime Lower insurance costs More reliability Lower fuel costs
Environmental Management Systems (EMS)	Less emissions (CO, NOx, HC, particulates) Less waste Less consumption of water, fuel and other resources	Lower taxes and charges Lower fuel costs Lower water bill Lower power cost

Chapter 2: Environmental impact

Trends in almost all sectors of the economy will immediately affect the transport sector. In other words, a growth in the economy leads automatically to a growth in transport. It is not possible, other than in planned economies, to decouple economic growth and growth in road transport.

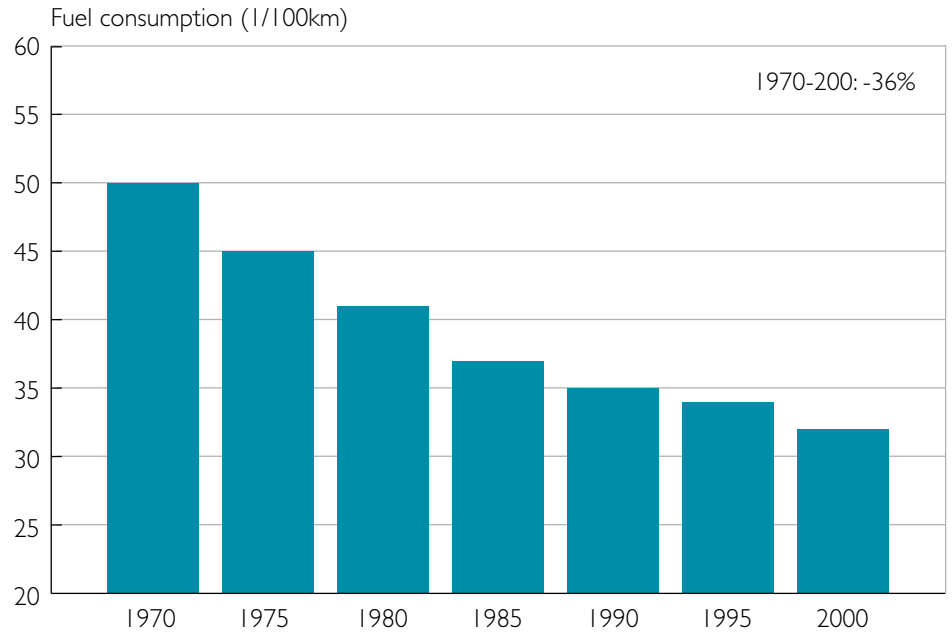
Decoupling of growth in road transport from its environmental impact

However, and more importantly, it is possible to decouple growth in road transport from its environmental impact. As a continuous process the road transport industry provided new vehicle technology and the transport operators financed it by purchasing new trucks and coaches. With this mutual dependent partnership road transport took the lead to achieve sustainable development and a lot of noteworthy successes can be shown.

Over the past 30 years, fuel-economy measures caused the average diesel consumption of a new 40-tonne truck to drop from 41 to 32 litres per 100 km. Considering the weights involved, this means that the road-haulage business has already caught up with the '0.9-litre car' with its 0.9 litres of fuel conveying one tonne of vehicle weight a distance of 100 km. The resulting decrease in energy consumption and in CO_2 emissions shows that this development has also eased the vehicle-specific burden on the environment. There can hardly be a better example of economy and ecology going hand in hand.

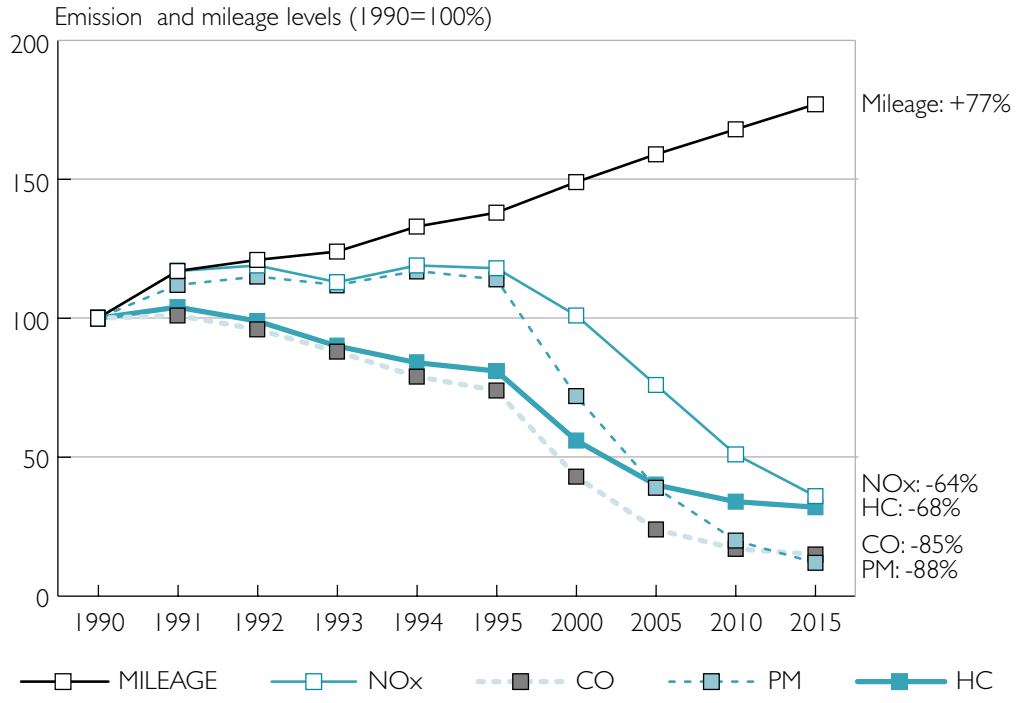
Thanks to the road transport industry's tremendous investments in new technology, the 1990s have seen pollution from trucks – hydrocarbons and nitrogen oxides – cut by half. The other major pollutants, such as smoke known as particulate and carbon monoxide have been cut by up to 75%.

Box 4: Fuel consumption 40-tonne truck



Source: Verband der Automobilindustrie (VDA)e.V.

Box 5: Emissions 1990-2015 (D) road transport of goods



Source: IFEU Institut für Energie- und Umweltforschung, Heidelberg

There are several reasons for the above developments. Firstly, trucks built today are much more fuel-efficient than older ones. Secondly, new trucks have to meet increasingly stringent emission norms, which means they are far cleaner that older vehicles. Moreover, the ongoing fleet renewal within the transport industry reduces its impact on the environment even further. The road transport industry is prepared to continue with heavy investments to be able to achieve further reductions on the environmental impact. By the year 2015, pollution from trucks will be reduced by another 30%.

Special insulation and other noise-control techniques make today's trucks substantially quieter than those built just a few years ago.

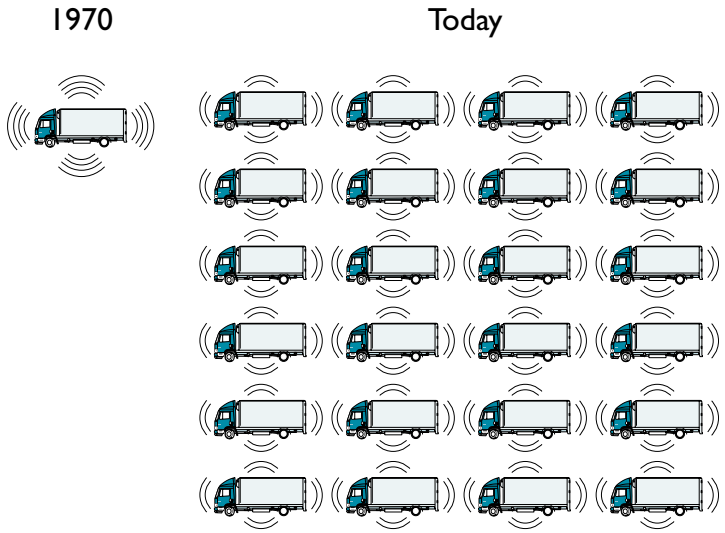
Huge investments by the road transport industry in, for example, new engines and tyres have helped reduce annoyance levels by 25% – a considerable achievement in the light of an increase of trucking by over 40 % in the last ten years.

Chapter 3: Social aspects

People tend to associate largeness – to a certain degree – with danger or risk. Transferred to road traffic: if an accident occurs between a truck, a bus and another vehicle, the public is likely to presume that the truck was at fault.

The poor image does not correspond with reality. In industrialised countries with proper infrastructure only 5% to 10% of accidents actually involve trucks, whereas 90% to 95%

Box 6: Truck noise 1970/1998



1. 24 modern trucks make no more noise than one built in 1970!

2. Reduction of annoyance levels by 25% in spite of strong increase of road goods transport

Source: VDA

involve private cars and other road users. Even though trucks represent a much smaller proportion of total road traffic than private cars, it is nevertheless true that trucks are less often involved in traffic accidents in proportion to their number on the road.

When it comes to buses and coaches, the statistics show that they represent the safest mode of transport. Today buses and coaches are involved in less than 1% of all road accidents resulting in casualties.

Human failure is generally viewed as being the number one factor in traffic accidents. However ideal the road infrastructure, however optimised the vehicle, if the driver is not competent enough, there is a high risk of accidents. Accident-prone behaviour can be averted or remedied by two types of action – training and education

IRU has produced professional driver training handbooks for truck driving, as well as for coach driving instructors, thereby stressing the need for young drivers to be given practical training on vehicles of the type they would be using, and also underlining the usefulness of a group training approach.
More recently, IRU produced trainer and trainee packs on:

- defensive driving,
- driver awareness,
- a video on defensive and safe driving.

They are used not only in initial training, but also in revision courses for qualified drivers. Updating drivers on new technical or legislative features and eliminating possible negative driving habits is generally considered of great importance.

IRU's most recent initiative in the training field is the IRU Academy. Its aim is to contribute to the international harmonisation of training and testing in road transport, thereby indirectly improving the quality of services offered by transport operators. Initially, the IRU Academy is intended to elaborate training and testing

standards and to issue IRU Academy diplomas or certificates attesting that an individual has completed a training course provided by a training institution certified by the IRU Academy as capable of providing the requisite quality of training.

In the first place, this will concern training for the Certificate of Professional Competence for transport operators, which among other features aims to ensure that the rules of road safety are being respected. Individuals who successfully pass tests and examinations will be able to apply for and receive an IRU Academy diploma or a certificate attesting their competence in the agreed sphere of activity.

Part 4: Process for improvement: Industry strategies, approaches and measures taken to achieve progress

Chapter 1: Strategies and approaches used to address the environmental/social aspects of sustainable development

Transport occupies an irreplaceable socio-economic position linking supply to demand. It is a necessary link between the various industrial sectors. As the mode that brings the majority of passengers and goods to their final destinations, road transport is indispensable to tourism, trade and the well being of any economy. The road transport industry is well aware of its essential economic role and its social responsibilities regarding road safety, labour conditions, the environment, energy savings and, consequently, sustainable development.

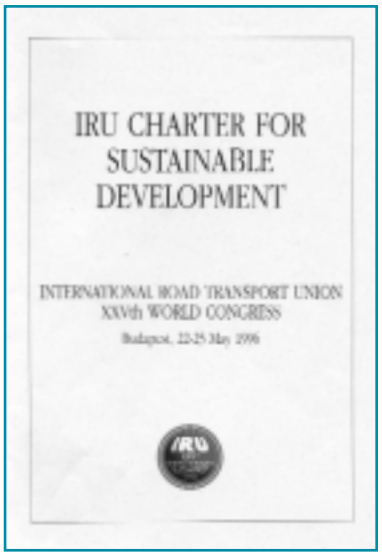
IRU has taken the proactive step of developing the framework of an industry-wide policy for realising the three objectives of sustainable development. These three objectives found in the IRU Charter, as prescribed in Agenda 21, are economic development, social equity and environmental protection.

It is important for IRU to get our members and the transport operators involved. Therefore we had to convince them to make a first commitment in the field of sustainable development We succeeded and the IRU Charter for Sustainable Development, which was unanimously adopted by the IRU membership at its World Congress in 1996, became the industry's commitment to drive towards the target of achieving sustainable development in road transport.

The Charter states:

Considering that:

- road transport, like every transport mode and human activity, pollutes;
- road transport realises its responsibility to provide the cleanest, quietest, safest and most efficient service possible while recognising that its clients, responding to consumer trends and market demand, have the greatest influence on transport flows;
- noteworthy environmental results have already been accomplished in passenger and goods road transport which, despite increasing volumes, will lead to further significant reductions in polluting emissions, waste, and resource consumption through technical improvements, driver training and more efficient operations;
- transport safety is a key environmental issue;
- government, at all levels, should continuously encourage needed infrastructure development, professional training, and technical improvements in the logistic/transport chain, in co-operation with road transport associations and



individual transport companies, and self-regulatory measures aimed at achieving sustainable development in road transport;
- economic development is dependent on an efficient passenger and goods road transport system.

IRU, its member associations and affiliated transport operators, undertake to work together towards the common goal of sustainable road transport:

- encourage the development of long-term co-operation and common goals between governments, national associations and fleet operators aimed at improving environment and energy efficiency, as well as road safety, by each party fulfiling its respective responsibilities;
- call upon all road transport users and partners (road builders and maintenance companies, vehicle and equipment manufacturers and petroleum companies), as well as road transport clients and their intermediaries, to co-operate to reduce road transport pollution at the source, and all governments to urgently provide sufficient infrastructure to ensure that industry measures to achieve sustainable development will not continue to be hampered by inadequate infrastructure and make certain that existing infrastructure capacity will not be threatened by future demographic developments;
- co-operate with public consumer and labour groups as well as the private sector to develop educational and research programs to help raise awareness and understanding of road transport's important role in achieving sustainable development.
- support the implementation of all non-discriminatory legislation which would effectively achieve sustainable transport at the lowest economic cost;
- promote, where competitive, the use of intermodal transport services;
- support the internalisation of infrastructure costs of all modes of transport.

Implement road transport operations which respect the environment and other road users

- study industry and road transport developments with a view to promoting environmentally sound company policies, programmes and performance, taking into account technical developments, scientific understanding, community expectations and client's needs, and establishing quantifiable performance measures and targets to track progress;
- undertake measures to assure optimal fleet maintenance and to verify the proper functioning of vehicles with the objective of remedying immediately any perceived abnormalities to optimise road safety and energy savings and reduce polluting emissions;
- instruct and train personnel to conduct their respective daily activities professionally, in an environmentally responsible manner, such as minimising use of all resources and their waste and, moreover, employing the appropriate driving techniques and best logistics strategy (optimise choice of vehicle, itinerary, etc.) to assure optimum security for themselves and other road users as well as to limit polluting emissions and fuel consumption.

The proactive IRU initiative 'Driving towards Sustainable Development', which followed the adoption of the Charter, paves the way for concrete actions to be taken by all parities concerned in achieving this common goal. Driving Towards Sustainable Development defines the three prerequisites to implement sustainable development

1. Innovation

Environmental questions must be addressed at source in a cost-effective manner. Cleaner, quieter and more fuel-efficient vehicles, better fuel quality and improved logistics are just a few measures for improving environmental performance of road transport.

Box 7: IRU – Driving towards sustainable development – IRU principles

- Innovations: 'at the source' measures are the most efficient and cost-effective measures for improving the environmental performance of road transport.
- Incentives: engagement of governments to reward implementation of Best Industry Practices by road transport operators.
- Infrastructure: improved traffic flow is a sine qua non condition for sustainable development and requires more investment in road infrastructure.

2. The road transport industry needs governments to encourage rapid implementation of sustainable development technologies and practices with positive incentives

Recognising the significant past and future successes of these 'at source' efforts, the road transport industry will continue to reduce its environmental effects while driving economic development. However, to achieve sustainable development, road transport's commercial and governmental partners will have to take responsibility for their fair share.

The road transport industry cannot accept responsibility for trends and developments which are beyond its influence, yet impact heavily on its environmental performance, such as the congestion and pollution resulting from inadequate infrastructure planning, management and investment, despite ever increasing economic demands.

3. Ensuring the efficient movement of commercial traffic

Traffic jams are economically, socially and environmentally damaging. The best use is not being made of existing infrastructure and infrastructure investment has failed to keep pace with economic and social demand.

- congested distribution networks limit economic development and decrease competitiveness through the reduction of efficiency and an increase in costs,
- congestion inhibits the mobility of passengers.
- congestion will limit the effectiveness any road-transport-industry environmental initiatives.

Making better use of the existing road infrastructure, including giving priority to commercial traffic for economic reasons, and investing in necessary road infrastructure development, are sine qua non conditions for achieving the common goals and principles of Agenda 21.

IRU *Guide to Sustainable Development* – pioneer work

The road transport industry does not start from zero. In fact, subsequent to Agenda 21 and the signing of the IRU Charter in 1996, some of the IRU member associations have already done pioneer work.:

- International Transport Denmark (ITD) in Denmark.
- Bundesverband Güterkraftverkehr, Logistik und Entsorgung (BGL e.V.) in Germany.
- Transport & Logistiek Nederland (TLN) in the Netherlands.
- Norges Lastebileier-Forbund (NLF) in Norway.
- Svenska Akeriförbundet (SA) in Sweden.
- Freight Transport Association (FTA) in the United Kingdom.

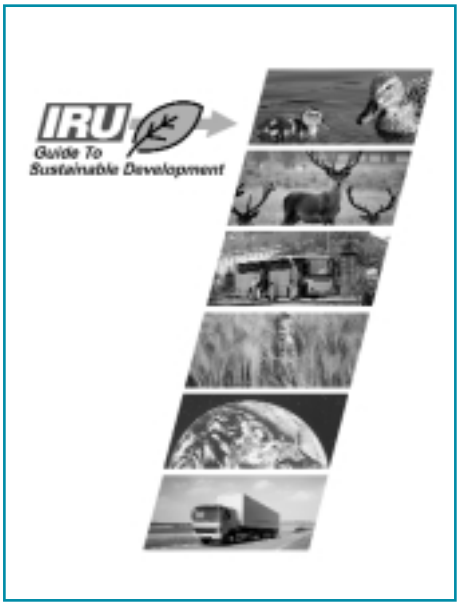
As regards the structure, the systematic approach and the sophistication, these programs vary. They emphasise the measures and best industry practice that significantly improve:

- environmental performance,
- transport safety,
- fuel efficiency,
- awareness,
- profitability.

Nevertheless they have one goal in common – they are all aimed at contributing towards sustainable development while at the same time improving profitability for road transport operators.

As mentioned above, the road transport industry is, to date, the only transport mode that has committed itself to achieving sustainable development. It was Maurice Strong, UN Earth Summit secretary general, chairman of the Earth Council and special adviser to the UN secretary general, who said at the IRU World Congress in 1996 that for him the signing of the IRU Charter was 'one of the most important and encouraging events of the post-Rio period'. He added that the IRU and its members should 'bring it back home to their members and make it operational'.

This request by Strong led to the next step on the IRU Agenda, the IRU *Guide to Sustainable Development,* which IRU published in the year 2000.



The purpose of the guide is to learn from the above mentioned existing national initiatives and to encourage further national programmes by providing detailed implementation recommendations.

The IRU *Guide to Sustainable Development* is addressed to the national road transport associations and, finally, to the road transport operators. The Guide is a reference work of the above mentioned existing national action programmes, and contains IRU modules that give practical support for the application of tailor-made measures and programmes at national level. The objective of the guide is to encourage as many transport operators as possible to implement sustainable development practices.

The IRU Guide acts as a flexible model and practical support for all national IRU member associations. Using a modular approach, they will be able to choose from the Guide modules and measures that will contribute to the achievement of sustainable development. Each module shows a specific approach by which a national association can help to implement sustainable development principles at transport operator level.

The great advantage is that the following modules can be tailored and allow the greatest flexibility to take into account the needs of transport operators at national level and within their respective transport markets.

The IRU modules documented in the new guide cover a wide range of activities:

Module 1: Signing the IRU charter
This IRU module anticipates that most national campaigns will start with the signing of the IRU Charter for Sustainable Development by individual transport operators. This should help raise awareness and commitment among hauliers, and must be followed by implementation of measures at transport operator level, supported by programmes

initiated by associations. Preparing for the signing of the IRU Charter can go hand-in-hand with organising seminars to inform transport operators about the IRU Charter and Agenda 21, or providing written information such as manuals.

Module 2: Well driven campaign
In Well driven campaigns, participating operators commit themselves to improving road safety, by means a certain code of good practice developed by the national road transport association. Well driven campaigns help improve vehicle safety standards and driver behaviour. No third-party audit is required; participants are responsible for compliance with the campaign's code of conduct, and their success or failure is monitored and reported by the public.

Module 3: Environmental Management System (EMS)
This module encourages the implementation and possible certification by transport operators of an EMS which is the most comprehensive and thorough way to integrate sustainable development practices into a company's every day activities. Such EMS' can use the ISO 14001 standard or one tailored for road transport, incorporating additional criteria for transport operators, but still compatible with ISO.

Module 4: Environmental controlling
This module describes the development and application of environmental controlling tools and techniques, such as green accounting that measure the use of resources and the environmental impact of specific activities. Green accounting complements the existing financial controlling system, with which it should be integrated. Standard indicators will allow benchmarking against other companies.

Module 5: Promotion of best industry practices
This module covers the promotion of best industry practices, including industry awards for environmental excellence and industry reports on good practices. Through such reports, for example, road transport operators can learn from each other's efforts or about the standards set by the pioneers of the industry. Reports may be drafted in co-operation with commercial or government partners. These could be helpful in encouraging widespread adoption of best industry practices identified.

Module 6: Driver training
This module addresses the human element through the training of bus, coach and truck drivers – aimed at improving road safety, fuel efficiency and load security. The philosophy behind this module is that well-trained and motivated drivers are involved in fewer accidents, use less fuel, are more reliable and customer-oriented and know their responsibilities vis-à-vis the environment and other road users.

Chapter 2: Assessment of successful/unsuccessful strategies and approaches

Since the Rio summit, IRU has been working closely with its members and politicians to drive towards sustainable development. In that context the IRU translated complex concepts into practical actions for its members showing at every step that striving for sustainable development is a win-win situation.

The promotion of sustainable development even became a constitutional obligation and, in order to increase public and politicians awareness, IRU launched five CNN commercials to show the environmental performance of road transport.

In striving for sustainable development IRU believes in the following critical success factors:

- innovation,
- incentives,
- infrastructure.

Being fully aware of the economic and social dimension of sustainable development, the IRU *Guide to Sustainable Development*, and its six IRU modules, concentrate on the following aims:

- to create awareness of the objectives and benefits of sustainable development among transport companies,
- to optimise road safety and reliability of road transport,
- to improve resource efficiency, especially fuel consumption,
- to reduce emissions (primarily CO_2, CO, HC, SO_2, NO_x and particulates),
- to limit noise, particularly at company sites and in inner cities.

Through the IRU Academy we are, furthermore, able to provide a technology transfer to all our members and transport operators, entertaining a highly developed network across all five continents allowing for unimpaired communication.

Nevertheless:

- we have so far failed to convince the government side of the role of positive incentives and to raise awareness of their responsibility share;
- yet, successful implementation of sustainable development is vitally dependent on recognition.

IRU believes it is high time for greater co-operation and an honest dialogue between the different stakeholders to ensure the optimisation of road transport. The IRU *Guide to Sustainable Development* serves best the ultimate goal to maximise the benefits of transport while minimising its environmental impacts.

Part 5: Future challenges and targets: Agenda 2010

Chapter 1: Areas of demonstrated progress over the next ten years

IRU will aim to bring the relevant actors to the table to share their views on what is needed to achieve sustainable development. As it is called for in Agenda 21, to form effective 'action alliances', IRU will seek to obtain a uniform view among all commercial and governmental partners in order to meet the challenges of sustainable development in a joint effort.

The road transport industry will continue to be proactive

IRU will also continue to press for the implementation of the principles of sustainable development where they have the greatest impact - in the hands of transport operators. The IRU *Guide to Sustainable Development* will contribute greatly to this development in promoting best industry practice. It strives to act as a model to its national member associations in 64 countries.

IRU will continue its co-operation with the:

- UNEP/Division of Transport, Industry and Economics.
- Inland Transport Committee of the UN Economic Commission for Europe dealing with economic or environmental issues.
- United Nations Framework Convention of Climate Change UNFCCC.
- World Bank.
- World Trade Organisation (WTO).
- Organisation for Economic Co-operation and Development (OECD).
- European Conference of Ministers of Transport (ECMT) related to the Commission.
- European Environment Agency (EEA).
- European Union (European Parliament, European Commission, Council of Ministers Eurostat).
- International non-governmental organisations (ACEA, ECIS, ICC, IRF, OICA, UNICE, etc.) involved in activities related to the work of the Commission.

IRU's working programme for the next year includes the continued implementation of the *IRU Guide to Sustainable Development.*

1. Follow-up to the working programme from 2001:
- promoting the results contained in the NEA-Study: *The role of the coach in the economy* in terms of environmental performance of passenger transport.

2. Analysing the role of incentives in 2002:
- describe how the transport industry is affected by negative and positive incentives taking fleet renewal in different countries as a basis for the study,
- show that striving for sustainable development is a win-win situation that needs rewarding, not punishing by governments.

3. Promoting best use of existing infrastructure capacity in 2002:
- describe current infrastructure capacity naming various examples,
- show the negative impact of infrastructure bottlenecks,
- make suggestions for best use of existing infrastructure.

4. IRU report on best industry practice in 2002:
- continue a structured and standardised feedback of the implementation of sustainable development,
- collect worldwide examples for best industry practices, demonstrating and monitoring road transport's progress in

achieving sustainable development on an annual basis,
- demonstrate ways in which transport operators can best benefit from the implementation of the IRU modules,
- create a sustainability ranking according to the Dow-Jones Sustainability index,
- create a sustainability award.

5. Long-term agenda:
The road transport industry will continue its efforts to firmly implement its *Guide to Sustainable Development,*

Develop cleaner, quieter and more fuel-efficient vehicles through further technical improvements:

- reduce polluting emissions through improved combustion efficiency and exhaust treatment,
- use on-board computers to monitor and manage optimal engine performance,
- equip commercial vehicles with streamlining devices to further reduce fuel consumption,
- reduce the unladen weight of heavy commercial vehicles to increase payload and decrease fuel consumption and emissions,
- utilise tyres and road surface which reduce noise and fuel consumption,
- support transport operators in renewing their fleets in order to fulfil the latest environmental standards.

Improve driving behaviour by knowledge transfer via the IRU Academy:

- optimise speed, acceleration, manoeuvres etc. to increase safety and decrease fuel consumption, polluting emissions, tyre wear and drive train fatigue;
- improve trip and route planning systems;
- introduce new logistics concepts for urban distribution;
- optimise loading space by further standardising packaging.

Chapter 2: Areas of agreement/disagreement with other societal stakeholders

There are two major areas of disagreement with other societal stakeholders:

- CO_2 emission by different modes,
- the importance of new infrastructure in tackling the impact of road transport.

The first disagreement arises in the discussion of CO_2 emissions from different modes. It is often argued that shifting goods from road to combined transport road/rail would significantly reduce road transport's overall energy consumption and CO_2-emissions. Currently the European Climate Change programme (ECCP) is investigating several measures in the transport sector for reducing CO_2-emissions in order to meet the commitment set out by the Kyoto Protocol.

IRU commissioned a study by the Insitut für Energie- und Umweltforschung (IFEU) and the SGKV (Studiengesellschaft für den Kombinierten Verkehr) called *Comparative Analysis of Energy Consumption and CO_2 Emission of Road Transport and Combined Transport Road/Rail* in order to compare primary energy consumption and CO_2 emissions of pure road transport and combined transport. The study shows that the perception of the environmental impact by combined transport and pure road transport and the reality differs. The road transport did in this direct comparison surprisingly well.

The main results of the study are:

- electric trains have little impact on local air quality, but the thermal power stations that generate much of the electricity used to power them have a major environmental impact that needs to be taken into account. Non-thermal power sources may

not generate significant gaseous emissions, but they do cause other environmental problems. Hydroelectric power requires massive dams and penstocks which degrade delicate mountain eco-systems, wind and tidal energy require highly intrusive installations which makes them only acceptable in remote areas. Nuclear energy is still hampered by a lack of any reliable long-term solution for the resulting radio-active waste;

- combined transport is not always the cleanest mode of transport depending on relation, feeding and the source of the used electricity;
- combined transport is the cleanest mode of transport when the primary energy is produced by nuclear power plants;
- the rolling motorway (RoLa) performed worse, in terms of emissions, than the pure road transport.

The second disagreement concerns the importance of new infrastructure. The so-called Urban Mobility Report, an annual study by the Texas Transportation Institute at Texas A&M University, investigated the traffic situation in 68 cities across the United States. The results show that limited infrastructure causes traffic jams with growing aggravation.

The study discovered that the total congestion 'bill' for the 68 cities in 1999 came to 80 billion in lost productivity, 4.5 billion hours of delay and 25.7 billion litres of wasted fuel.

Not denying the relation between infrastructure and traffic volume, IRU believes that clearing bottlenecks, building new infrastructure and making existing road systems work more efficiently helps reduce the environmental impact of road transport of both highways and city roads.

Best use of existing infrastructure is also a critical factor to achieve more environmentally sound transportation. Trucks do not only deliver our daily consumer goods, they also remove the billions of tonnes of waste by door-to-door collection, including household rubbish, recyclable goods and industrial waste. Bus lanes, for example, could be opened for commercial vehicles at certain times to help relieve congestion. Quiet, low-emission vehicles could be allowed to offload goods in city centres at night, so they are not competing with passenger vehicles for limited road space during the day.

Part 6: Message to governments

GDP growth is a socio-economic goal pursued by all governments, and by all countries. Clearly, it has been a development desired by many, and realised by all economic actors together. But this goal, consistent with the principles of sustainable development, must be compatible with relatively new, socio-economic goals, such as environmental protection.

The road transport industry will do everything within its power to reduce emissions and avoid other negative aspects of its activities, to a reasonable, that is cost-effective, level. What must be underlined, however, is that despite all environment-related improvements, both past and anticipated, it remains a service industry that responds to clients' and societies' demands.

The foreseen increase in transport volumes will cause new problems which will not be solved by the transport industry on its own without addressing the underlying mechanisms and problems, in particular infrastructure deficiency.

Effective policy instruments are needed to achieve the aspired economic, social and environmental goals.

To achieve sustainable development in the road transport sector, it is necessary to lay down binding regulations, laws and standards within strict time planning and, consequently install enforcements to ensure their observance. As far as possible, legislation should be harmonised globally to avoid market distortions and, more importantly, be applied in a non-discriminatory way.

Yet, in general, the road transport industry in its diversity lends itself better to regulation by financial and taxation instruments than by legislation. It would enable entrepreneurs to independently manage their depending on their financial situation and within a certain legal framework, for example the purchase of cleaner, but more expensive – and less taxed – heavy commercial vehicles.

These instruments should:

- reward and encourage innovation, both technical and best practice;
- provide positive incentives;
- encourage best use of existing infrastructure and ensure adequate investment in new infrastructure.

As part of this process, IRU recommends the following principles be adopted in legislation regarding the economy, sustainable development and employment.

Economy:

- ensure that market liberalisation applies fully to all transport modes, including rail;
- equality of treatment between different transport operators and transport modes, to ensure a truly competitive market;
- acknowledge the major role played by the road transport industry;
- recognise and the support road transport profession as one of the major vectors in international trade and tourism.

Environment:

- invest heavily in the essential infrastructure needed to respond to traffic growth and to improve road safety;
- eliminate existing discrimination between transport modes and identify unmet environmental and infrastructure costs;
- ensure that commercial road services are not subject to road pricing, unless this treatment is applied to private vehicles as well – all road users should pay;
- systematically plough revenue raised from the use of road infrastructure back into improving the road network;
- allow more effective use of existing

infrastructure and provide better flow for commercial traffic;
- accelerate the construction of 'missing links' and eliminate infrastructure bottlenecks;
- explore the feasibility of adding extra driving lanes to existing motorways and main roads;
- dedicate a traffic lane to commercial transport;
- permit shared use of bus and taxi lanes by commercial goods vehicles;
- discourage the increase in private cars and stimulate collective transport;
- provide cleaner fuel to significantly reduce the emissions of all vehicles;
- investigate allowing heavier commercial vehicles to reduce the overall number of trucks on the road.

Employment/social equity:
- lighten the formalities that burden small and medium-sized enterprises (SMEs) and encourage commercial activities;
- reduce the existing fiscal pressure on, unskilled labour and the rates of VAT on high labour intensive services;
- encourage professional training in order to promote a better quality of service;
- modernise working conditions to give mobile workers adequate protection in terms of health and security.

Proper policy, planning and implementation of infrastructure projects worldwide will result in the reduction of polluting emissions without penalising either the road transport industry or general economic development.
Failure to do so will hamper economic development, reduce the mobility of persons and goods and place unnecessary burdens on the environment – all of which factors are opposed to the principles of sustainable development.

A modern society depends on road transport.

Annexe I

The IRU report was submitted at the invitation of: UNEP, Division of Technology, Industry and Economics, Paris, France.

Contact details

Copies of the *IRU Guide to Sustainable Development* and IRU *studies Role of the Coach in the Economy and the Comparative Analysis of Energy Consumption and CO_2 – Emissions of Road Transport and Combined Transport Road/Rail* can be obtained in English and French from the IRU ecretariat. Examples of best industry practices can be viewed on the IRU homepage.

IRU contact:
Jens Hügel,
Head – Economic & Environmental Affairs
International Road Transport Union (IRU)
3 rue de Varembé
CH-1211 Geneva
Switzerland
Tel: +41 22 918 2704
Fax: +41 22 918 27 41
E-mail: iru@iru.org,
Web site: http://www.iru.org or
http://www.iru.org/SustainWel.html

For details concerning the mentioned national programmes please contact:

Denmark:
Poul Bruun
International Transport Danmark (ITD)
Tel: +45 74 67 12 33
E-mail: pb@itd.dk
Web site: http://www.itd.dk or
http://www.transeco2.dk

Germany:
Dr. Adolf Zobel
Bundesverband Güterkraftverkehr
Logistik und Entsorgung (BGL)
Tel: +49 69 79 19 0
E-mail: a.zobel@bgl-ev.de
Web site: http://www.bgl-ev.de

Netherlands:
Paul Poppink
Transport en Logistiek Nederland (TLN)
Tel: +31 79 363 61 11
E-mail: ppoppink@tln.nl
Web site: http://www.tln.nl

Norway:
Christine Holtan
Norges Lastebileier-Forbund (NLF)
Tel: +47 22 03 32 00
E-mail: Christine.holtan@lastebileierne.no
Web site: http://www.lastebileierne.no

Sweden:
Marten Johansson
Svenska Akeriförbundet (SA)
Tel: +46 8 753 54 00
E-mail: marten.Johansson@akeri.se
Web site: http://www.akeri.se/english.htm

United Kingdom:
Karen Packham
Freight Transport Association (FTA)
Tel: +44 1892 552319
E-mail: kpackham@fta.co.uk
Web site: http://www.fta.co.uk

UNEP contribution to the World Summit on Sustainable Development

The mission of the United Nations Environment Programme (UNEP) is to provide leadership and encourage partnerships in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. **The UNEP Division of Technology, Industry and Economics (DTIE)** contributes to the UNEP mission by encouraging decision-makers in government, business, and industry develop and adopt policies, strategies and practices that are cleaner and safer, make efficient use of natural resources, ensure adequate management of chemicals, incorporate environmental costs, and reduce pollution and risks for humans and the environment.

This report is part of a series facilitated by UNEP DTIE as a contribution to the World Summit on Sustainable Development. UNEP DTIE provided a report outline based on Agenda 21 to interested industrial sectors and co-ordinated a consultation process with relevant stakeholders. In turn, participating industry sectors committed themselves to producing an honest account of performance against sustainability goals.

The full set of reports is available from UNEP DTIE's web site (http://www.uneptie.org/wssd/), which gives further details on the process and the organisations that made it possible. The following is a list of related outputs from this process, all of which are available from UNEP both in electronic version and hardcopy:

- industry sectoral reports, including
  - accounting
  - advertising
  - aluminium
  - automotive
  - aviation
  - chemicals
  - coal
  - construction
  - consulting engineering
  - electricity
  - fertilizer
  - finance and insurance
  - food and drink
  - information and communications technology
  - iron and steel
  - oil and gas
  - railways
  - refrigeration
  - road transport
  - tourism
  - waste management
  - water management
- a compilation of executive summaries of the industry sectoral reports above;
- an overview report by UNEP DTIE;
- a booklet including an extended version of the executive summary of the UNEP overview report;
- a CD-ROM including all of the above documents.

UNEP DTIE is also contributing the following additional products:
- a joint WBCSD/WRI/UNEP publication entitled *Tomorrow's Markets: Global Trends and Their Implications for Business*, presenting the imperative for sustainable business practices;
- a joint WB/UNEP report on innovative finance for sustainability, which highlights new and effective financial mechanisms to address pressing environmental, social and developmental issues;
- two extraordinary issues of UNEP DTIE's quarterly *Industry and Environment* review, addressing key regional industry issues and the broader sustainable development agenda.

More generally, UNEP will be contributing to the World Summit on Sustainable Development with various other products, including:
- the Global Environmental Outlook 3 (GEO 3), UNEP's third state of the environment assessment report;
- a special issue of UNEP's *Our Planet* magazine for World Environment Day, with a focus on the International Year of Mountains;
- the UNEP photobook *Focus on Your World*, with the best images from the Third International Photographic Competition on the Environment.

For further information contact:

International Road Transport Union (IRU)
3 rue de Varembé
CH-1211 Geneva
Switzerland
Tel: +41 22 918 2704
Fax: +41 22 918 27 41
E-mail: iru@iru.org,
Web site: http://www.iru.org

United Nations Environment Programme
Division of Technology, Industry and Economics
39-43 Quai André Citroën
75739 Paris Cedex 15
France
Tel: +33 1 44 37 14 50
Fax: +33 1 44 37 14 74
E-mail: wssd@unep.fr
Web site: http://www.uneptie.org/wssd/

IRU
Driving towards Sustainable Development

UNEP