SUSTAINABLE DEVELOPMENT

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TECHNICAL COMMITTEE 2.1
SUSTAINABLE DEVELOPMENT
AND ROAD TRANSPORT

INTRODUCTORY REPORT

CONTENTS

EXECUTIVE SUMMARY

Sustainability is a core issue for the whole of PIARC and all of its Committees. The purpose of this session is to illustrate how the proper consideration of sustainability is the route to achieving enhanced transport solutions that address problems and deliver society objectives in the social, environmental and economic dimensions.

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1. INTRODUCTION

Historically the development of transport solutions has focussed primarily on the resolution of transport problems. Other issues of a social and environmental context have often been addressed as a consequence rather than a prime driver.

Our purpose is to illustrate how the proper consideration of sustainability is the route to achieving enhanced transport solutions that address problems and deliver society objectives in the social, environmental and economic dimensions. The session addresses head on the challenges of delivering socially and environmentally acceptable solutions, whilst recognising the inescapable funding issues which must be considered and managed. Issues such as community impact assessment and impacts in urban areas together with a wide ranging analysis practice in handling environmental challenges will be set out and illustrated through a case study.

The session concludes with a discussion on how to provide a framework for the governance of sustainability considerations through the application of Corporate Social Responsibility approaches.

2. IMPLEMENTING SUSTAINABILITY

Taking account of sustainable development differs from impact studies in that:
- its objectives relate to an earlier stage, primarily the level of policies, plans and programmes, and not just that of projects;
- it does not merely involve environmental aspects and, on the contrary, aims to integrate environmental, economic and social approaches with a view to developing policies and projects which are viable, tolerable and fair.

Taking account of the principles of sustainable development therefore involves the early stages of project design and a broad approach in which transport is neither dissociated from the regions it passes through, serves and structures, nor the population it affects, whether users or residents, nor the public bodies which finance it.

In this connection, it must also be emphasized that the way the concepts of sustainable development are applied will not be the same in a developed or highly developed country as in a developing country. The priorities are not the same - although it is always necessary to take a long-term view, even in developing countries where issues related to the preservation of assets (water, cultural and archaeological heritage, etc.) are of vital importance.

Developing countries, occasionally with modest scale projects, often succeed to achieve an exemplary integration of the objectives of sustainability and to be very efficient in taking into account social stakes, thus performing an impressive step towards sustainable transport.

3. APPROACHES TO FUNDING ENVIRONMENTAL ACTION

Sound environmental management and social equity is critical to sustainable development. In many countries, special attention is being given to focusing funding needs in respect of environmental and social outcomes. But the way in which the financial implications of environmental policies and the environmental aspects of projects are taken into account, if at all, may vary.

Countries that have undertaken large scale mitigation and enhancement projects are very positive about the results and value of the effort. Yet there are a number of challenges that transportation agencies must overcome to facilitate this widespread use of environmental mitigation. Funding for such major efforts is clearly one of the greatest challenges. Often the combined costs of acquisition, site modification, and long-term maintenance are beyond the ability of the transportation agency alone. This often mandates the creation of partnerships with other agencies, governmental units and private organizations. However, funding and budgeting should be considered early in the planning process. The later the mitigation is considered, the greater the costs may become.

By creating plans and programs that identify specific funding addressing social and environmental objectives, mitigation options can be more focused and opportunities for enhancing the natural and human environment can be identified.

4. CORPORATE SOCIAL RESPONSIBILITY - A FRAMEWORK FOR SUSTAINABILITY CHOICES

Corporate Social Responsibility (CSR)

5. AIMING AT SUSTAINABLE INFRASTRUCTURE

Ensuring sustainable solutions in road transport, be it on the strategic, planning or project level, are a major goal in road administrations and companies responsible for the road network. Despite the fact that sustainable development is an issue originating from a global perspective, the findings of our work show that strong efforts are made to implement the concept on a national level.

In countries with well-established primary road networks, road transport is put into a greater context of transport and mobility comprising all modes of transport. In order to resolve an occurring transport problem, road infrastructure is just one of several options being evaluated in an intensive discussion with a strong political dimension. Public involvement in such decision-making processes is of vital importance to promote a better understanding of impacts and trade-offs of human mobility needs.

In countries still building on their primary road network, road transport is seen as an important factor for sound economic development as well as social welfare in terms of equal opportunities, both important pillars of the sustainability concept.

Applying the sustainability concept to road transport begins very early; the processes in the development and decision-making phase are crucial for the overall judgement as to what extent road transport can contribute to a sustainable development. Once modal decisions towards road transport and its infrastructure are taken and the project planning, constructing and operating phases are initiated, the focus within the triad of sustainability is shifting steadily towards mitigating environmental impacts.

In spite of the fact that a new or existing road will, in most cases, have more negative than positive impacts on the natural environment, most countries make efforts to integrate all aspects of sustainability (economic, social and environmental) into the road design process and during road management. Community and social impact assessment has been found to be a very effective process to consider the social and economic dimensions of sustainability in the context of road design and construction. A relevant topic when mitigating environmental impacts consists of avoiding fragmentation of natural habitats and, of growing significance, also fragmentation of the urban environment.

A key to assess sustainability of road transport in the long run appears to lie in the continuous collection of relevant data connected to the impacts of the road network. This monitoring of crucial indicators covering all three dimensions of sustainability is an essential and necessary requirement to analyse the progress of impacts along the life cycle of the infrastructure and to allow sustainability evaluation in the future.

6. REFERENCES

Focused Funding Survey; PIARC TC 2.1 Report 2007 (to be published).

How to apply the concepts of sustainable development to transport?; PIARC TC 2.1 Report 2007 (to be published).

Social and environmental approaches to sustainable transport infrastructure; PIARC TC 2.1 Report 2007 (to be published).

7. DRAFT CONCLUSIONS

Sustainability is a core issue for the whole of PIARC and all of its Committees. In developing PIARC's strategy, we need to remind ourselves of this. At present, this aspect is not totally successfully expressed within the organisation's practice.

7.1. Integrating sustainability

Can road transport contribute to the goals of sustainability at all? According to the responses given by countries participating in the Committee's survey, the question has to be clearly answered with “yes”. In order to resolve a transport problem, road infrastructure is mostly just one of several options evaluated in an intensive discussion with a strong political dimension.

Member countries need to integrate environmental and social considerations into their decision-making and activities. The concept of sustainable development requires a change of mindset to bring about full integration of the needs for economic and social development while still conserving and enhancing the environment. It is this full integration that will minimize the acceptance of mitigating or compromising essential environmental or social elements of projects.

The integration becomes possible by the means of a debate, which brings a synthesis emphasizing the essential function of governance and of local democracy. Public involvement is the key of social acceptance, and guarantees that all stakes have been expressed and taken into account. Such a debate is all the more efficient if it occurs at the earliest stages and at the main steps of the design and implementation of the project, infrastructure or transportation system.

A process based on priority given to one main objective (usually economics or environment) inevitably creates conflicts, usually leading to stopping or suspending the project, going against collective needs and interests, and basically against sustainability. The existence of an explicit legislation about sustainable development, inscribing its principles in law, always shows to be very helpful to implement sustainability in transports.

7.2. Funding environmental action

A thorough financial analysis of the specific projects that implement the transportation plan will help to ensure that projected costs are realistic and affordable. Unless transportation projects are tied to reliable funding sources, the recommended solutions that are developed for environmental and social aspects can easily become a "wish list."

Overall, based on the importance of social and environmental objectives in transportation plans, integrating mitigation into program level funding does not generally serve as a barrier to project budgets. In fact, integrating mitigation into the program level funding will not only provide a more collaborative, well-coordinated decision making process, it can save money by shortening the project development process and eliminating obstacles early on.

In order to make effective assessments as well as meet all of the full funding requirements and objectives, it is important to maintain the rigor of plan and program level appraisals. Although training programs and incentives are good tools, a routine assessment or review process is recommended to ensure that the guidelines are properly followed in all plans and programs and that objectives are met.

One should consider developing regulations or incentives to keep environmental and other mitigating factors as priorities in projects rather than allowing them to be among the first components to be compromised.

7.3. Implementing environmental goals

Fragmentation effects have been identified as very relevant negative impacts of road projects on the environment. There is growing awareness in a lot of countries of the need to mitigate fragmentation effects of roads and road transport in the urban environment. The key to success consists of a holistic approach and interdisciplinary work between road planners, urban architects and public involvement throughout the project development and evaluation.

In construction and maintenance, the focus is generally on technical and, to some extent, traditional environmental concerns, especially mitigating such negative impacts that may arise during works. The link to the sustainability concept is fairly weak. Developing the kind of specific targets and, especially, functional requirements that would fully utilise the opportunities of the production process, is a sizable task that still remains. The administrations need to co-operate closely with contractors and operators.

Sustainability evaluation of road transport is in most countries based on methods originating from the environmental perspective such as Strategic Environmental Assessment or Environmental Impact Assessment. Few countries apply additional methods, which would give a broader view of impacts or an overall perspective on all three dimensions of sustainability. The development of such methodological instruments on the level of project and plan evaluation seems to be an open field for research.

A key to assess sustainability of road transport in the long run appears to lie in the continuous collection of relevant data connected to the impacts of the road network. This monitoring of crucial indicators covering all three dimensions of sustainability is an essential requirement to analyse the progress of impacts along the life cycle of the infrastructure and to allow sustainability evaluation in the future.

7.4. Getting more - from less - for longer

The methods and instruments used at present seem to allow a sophisticated approach towards the goal of sustainable road transport, yet there also appears to be a great potential for improvement and refinement. Whether or not a sustainable solution for a road project or road transport in general is actually achieved will always remain with future generations for final judgement. The continuous effort to optimize every single dimension of sustainability, however, seems to be a promising strategy towards sustainable road transport. This strategy should consist of always “getting more – from less – for longer”.