

## NEW RELEASE

## THE USE OF MONETISED VALUES FOR SOCIO/ENVIRONMENTAL IMPACTS OF ROAD PROJECTS 2008R19

Investment decision makers face a difficult challenge to assess the many competing demands reported in a transport appraisal for a specific project or an investment programme. There are established procedures and values used throughout the developed world, albeit different from country to country, which are considered sufficiently robust to calculate a reliable cost-benefit ratio. It is widely recognised that transport projects, road projects in particular, have much wider impacts than just the economic efficiency of the project. The task of undertaking a cost-benefit analysis on a road project or series of road projects is further complicated with some factors readily quantified in monetary terms, whilst others of no less importance are simply reported using qualitative assessment methods.

This report was prepared by the World Road Association (PIARC) Technical Committee 1.1 – Road System Economics. Its primary aim is to investigate the “soft factors” which are used to quantify social and environmental impacts of a proposed road project, with a long term view to recommending a series of best practice road evaluation methods. The report is an extension of previous work which was undertaken by former PIARC Committee C9, in the lead up to the Durban World Road Congress in 2003.

In order to establish the baseline of the current practice of incorporating socio/environmental factors into quantitative project appraisals, an international survey was developed and distributed to a wide range of countries throughout the developed and developing world. The survey investigated the extent to which the various countries have developed or implemented road project evaluation methods which fully capture the diversity of road benefits and take into account regional characteristics and social development needs. It targeted a range of potential socio/environmental impacts which could be used in quantitative project analysis including: visual amenity; noise; air quality; water quality; ecological/biological; geological features; agriculture and soils; cultural heritage; accessibility; economic and land use; and health.

Outcomes from the HEATCO (**H**armonised **E**uropean **A**pproaches for **T**ransport **C**osting and **P**roject **A**ssessment) study were also reviewed. This study, conducted by the European Union (EU), analysed current practice in road project appraisal techniques across 25 EU countries. This early study indicated little coherence or consistency amongst European countries in both the methodology of assessing impacts, and the units used for monetisation.

Current practices in Australia, New Zealand, Japan, South Africa, North America and South America were compared to those of Europe. In countries where established and sophisticated monetary values were used, there appeared to be little consistency with European practices. Methodologies adopted tended to reflect the relative priorities of the particular government, in terms of environmental protection, social equality, economic growth and sustainable development.

The report investigates the potential transferability of existing knowledge and practices to developing countries. As a result of analysis of current practice, a series of tables were developed which may be used by countries with less evolved methodologies to assess a project's viability in terms of the three most commonly used socio/economic factors - climate change, air and noise quality. The report also presents recommendations for further work in the area, with a long-term goal to develop a more comprehensive methodology to determine the contributory effect of socio/economic factors on a project's viability.

This report can be accessed through PIARC's Virtual Library at:  
<http://publications.piarc.org/en/search/detail.htm?publication=3229>