Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia - Social and Behavioral Sciences 48 (2012) 3065 – 3077

Procedia
Social and Behavioral Sciences

Transport Research Arena– Europe 2012

Towards a sustainable development approach in transport assessment

David Meunier[a]*

[a]*Université Paris-Est, LMT, UMR T9403 Ecoles des Ponts ParisTech IFSTTAR UPEMLV*

Abstract

Transport project assessment, starting from a classical socio-economic approach using cost benefit analysis, has progressively taken into account environmental concerns, both through external cost estimates used in socio-economic indicators and through environmental studies, which have become compulsory in many countries as is the case in the European Union.

The purpose of this paper is to analyse in what directions the transport assessment system could go in order to be more in line with a sustainable development (SD) approach. After a discussion on selected key characteristics of SD as guides for the analysis, we analyse the existing situation and its current developments as illustrated by a French case, and try to see what would be missing with regard to the key characteristics identified.

Finally, ideas for a new approach in project assessment are discussed, covering the assessment process, its contents, and its links with project design, from a SD point of view.

Sustainable development, evaluation, assessment process, transport project, governance, impact study

1. Introduction

Transport infrastructure has for a long time been one of the few fields where public project assessment has been intensively put in practice. Historically starting from a classical socio-economic approach using cost benefit analysis, transport assessment has progressively taken into account environmental concerns. This has been obtained both through external cost estimates used in socio-economic indicators and

* *E-mail address*: david.meunier@enpc.fr

doi:10.1016/j.sbspro.2012.06.1273

through environmental studies, which have become compulsory in many countries as is the case in the European Union.

Still, though they now have some intersections, cost-benefit analysis (CBA) and environmental assessment are mostly developed in parallel. Other kinds of assessment (financial analysis, multi-criteria analysis) cast some light on some complementary issues; but social aspects and other sustainable development (SD) topics such as risks and uncertainties, or project governance, are often not considered specifically, even though some countries have developed methodological frameworks to cope with some these topics. The purpose of this paper is to analyse in what directions the transport assessment system could go in order to be more in line with a sustainable development (SD) approach. After a discussion on selected key characteristics of SD as guides for the analysis, we analyse the existing situation and its current developments as illustrated by a French case, and try to see what would be missing with regard to the key characteristics identified. We will focus on big infrastructure projects. The principle of proportionality leads to adjust the assessment effort to the size of the projects; in a SD approach, though, the size of the project is not only a question of physical size or construction costs, it includes the potential magnitude of economic, social or environmental impacts.

The reader may have heard of initiatives aiming at obtaining a sustainability index or other kinds of sustainability estimation. Most of them are technical and focussed on methods for combining and aggregating indicators from the 3 pillars. We will not discuss them here since our purpose is at the scale of the transport assessment system; but in the view developed here, even if they were perfect, they would cover only a part of the SD issues. Other initiatives have a broader scope, such as sustainability impact assessment (SIA) processes, promoted by OECD (OECD 2010) or the European Union. These initiatives focus in fact mainly on regulatory issues (RIA) and are policy-oriented. Again, our purpose is not the same, SIAs give a general framework for policy-makers, whereas here we focus on the transport assessment system and start from the existing system rather than trying to build from scratch.

To begin with, we could try to start from the definition of "sustainable development". Unfortunately, it has many meanings (Williams § Millington, 2004), and even the well-known Bruntland definition (United Nations, 1987) is sometimes given several interpretations. Therefore we will not go into deep discussion in order to choose between "weak" or "strong" SD nor discuss the difference between green growth or green economy or question mixed concepts such as environmental sustainability (Ekins, 1999). Instead, the focus will be put on some main characteristics of what could be called the SD philosophy.

First of all, the unavoidable three pillars of SD may be interpreted for transport assessment as estimation of economic, environmental and social impacts, through diverse criteria and indicators. But besides this basic approach, we will retain as key issues of SD[†] the time dimension - not limited to taking account of next generations -, the issue of governance - which is linked to the social dimension but goes far beyond -, and the issue of uncertainty which is present in many different forms. But furthermore, sustainable development implies also not only observation and analysis. It is also a philosophy of action. This last characteristic is somewhat difficult to cope with for transport assessment, since assessment exercises do focus on organized data gathering, interpretation with the help of methodologies, and presentation of results. There seems to be no room for action, since assessment stops where decision begins, the main challenge being to give to decision-makers the most adequate processed information on the consequences of their possible decisions. We will see that, while retaining the clear limit between assessment and decision, the SD philosophy of action can be transposed to transport assessment.

[†] Some authors (see Gibson 2006) go much further and propose to design sustainability assessment as a fully integrative process and accordingly to redefine evaluation criteria which would avoid the three conventional pillars. We propose here a medium way, because our starting point is the existing transport assessment system, because we feel that this system can evolve on the key SD issues selected, and because progress on these issues appears to be a pre-requisite on the way to ideal SD assessment.