AARHUS UNIVERSITY
DEPARTMENT OF ENVIRONMENTAL SCIENCE
Frederiksborgvej 399, 4000 Roskilde

EXTERNAL SEMINAR
5 March 2018
10:00 – 11:00
Venue: The Pavilion

Title: Carbon valuation in the transport sector: Reflections on the Swedish case

Speaker: Associated Professor Jamil Khan from Environmental and Energy Systems Studies, Lund University

Abstract: Cost-benefit analysis is an important tool for decisions in infrastructure and transport planning. One effect that is calculated in cost benefit analysis is climate effects and for this it is necessary to make valuation of the social cost of carbon. There are different ways to calculate this cost and there is no consensus on what method to use. In Sweden the social cost of carbon that is used in cost benefit analysis in the transport sector is based on the Swedish carbon tax on fossil fuels which today is 1.14 SEK/kg CO2 (or approx. 114 €/tonnes CO2). Within economics there is a longstanding discussion on how to calculate the social cost of carbon, while the question has not been studied from a broader social science perspective.

The aim of this paper is to analyse how the valuation and use of the social cost of carbon can be understood from a political science perspective, and whether it can contribute to effective climate policies. Furthermore, the paper will discuss whether cost benefit analysis is a suitable method to assess the appropriateness of transport infrastructure (at least from a climate perspective), since climate effects have a marginal impact on calculation outcomes. The paper addresses three questions:

- To what extent can the present carbon valuation in Sweden, based on the carbon tax, be seen as a reflection of the current political estimation of the carbon value?

- To what extent does the present carbon valuation affect the outcome of cost benefit analysis, and how important is the cost of CO2 emissions in the calculation?

- How can the long term effects of CO2 emissions on the environment and on society be considered differently in transport and infrastructure planning?

Host: Senior Scientist Steen Solvang Jensen, ATMO (Atmospheric Modelling) ssj@envs.au.dk

External guests interested in attending the presentation should email Christel Ege-Johansen, cej@envs.au.dk