Assessing Transport Infrastructure Sustainability

Reviewing practices and identifying issues together with knowledge gaps

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Aim of study

• What are the current best practices in sustainability assessment of transport infrastructures?

• Are there any lessons to be learned?

• What are the current issues and knowledge gaps in connection to these practices?

A foundation for collaboration between…

Chalmers University of Technology
Norwegian Public Roads Administration
Scope of study

- Reviewing scientific literature
  - Published between 2000 and 2014

- Main sources of information:
  - Databases: Scopus and Web of Knowledge
  - Selected journals: Environmental Impact Assessment Review and Impact Assessment and Project Appraisal

- Target terms:
  - “Sustainability assessment”, “transport”, “infrastructure”, “road” and “strategic environmental assessment”

Reviewing almost 100 articles
Best practices – Many tools for sustainability assessment...

Based on Ness et al. 2007: “Categorising tools for sustainability assessment”
Best practices - Relations between transport assessment tools

Possibly integrated in EIA (and SEA) procedures…

- CBA
- MCA
- LCA

However, there are many limitations with these current best practices…there are some lessons to be learned.
Lessons to be learned – For the procedure

• Incorrect estimation of environmental impacts
  — Only considering direct effects

• Restricted stakeholder participation
  — Initiated too late, after decisions are already made

• A need for collaboration and communication
  — Between planners in different fields

• Insufficient or absent monitoring and follow-up
  — Insufficient monitoring of socio-economic but also environmental effects
Lessons to be learned – A need for wider perspectives

- Consideration of alternatives
- A need to combine knowledge
  - From different fields
- Inadequate consideration of cumulative environmental effects
- Limited understanding of indirect effects
- Limited coverage of social aspects
Take home lessons – Procurement of assessment

Ask for…

• Evaluation of alternatives
• Inclusion of a wide range of stakeholders to be involved in the early phase
• Evaluating with different/wider geographical and temporal perspectives
• Provide alternatives for how monitoring and follow-up could be managed
• Connection between steps in the procedure of assessment but also with other fields and procedures