

A Swedish CBA on acidification abatement the CAFE Baseline scenario

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Background

The socio-economic rationale for further emission abatement in Sweden was the main driver for this Cost Benefit Analysis (CBA). The air quality work in Sweden has progressed, but there is still a lot to be done in the national air quality work. This CBA aimed at answering whether the reductions of acidifying emissions resulting from the air quality initiatives in Sweden could be justified from a socio-economic approach. It can, hopefully, serve as a guideline to whether more stringent policies and legislation should be advocated.

Benefits

The total NPV of benefits related to health impacts, reduced corrosion, enhanced aquatic biodiversity and reduced base cation depletion is estimated to be in the range of 203 million €₂₀₀₀, as shown in tables below:

NPV, abatement benefits (mio €₂₀₀₀)

Benefits reduced acidification	
All health effects	121
Construction material	32
Biodiversity	43
Red. BC depletion	11
Total MB	207

Costs

The NPV of the total costs to reduce the impacts of acidification on health, corrosion, aquatic biodiversity and reduced base cation depletion, ranges between 122 and 172 using the scenarios depicted below:

NPV, abatement costs (mio €₂₀₀₀)

Costs reduced acidification		
	Taxpayers scenario	Source contributor scenario
SO ₂ Abatement MC	11	50
NO _x stationary Abatement MC	106	118
NH ₃ Abatement MC	5	4
Total MC:	122	172

Net Benefits

The following net benefit on acidification and health effects from the abatement of SO₂, NO_x and NH₃ emissions is shown below:

Net Benefit abatement (mio €₂₀₀₀)

	Taxpayers scenario	Source contributor scenario
Net benefit	85	35