

# Table of contents

<b>List of abbreviations</b> .....	9
<b>Executive summary</b> .....	11
<b>Chapter 1. Defining the economic cost of health impacts</b> .....	15
1.1. Mortality: The value of statistical life .....	17
1.2. Morbidity: In search of a standard method .....	19
1.3. The dominance of mortality costs over morbidity costs .....	23
Notes .....	26
References .....	27
<b>Chapter 2. Reviewing the evidence on and calculating the cost of the health impacts of air pollution</b> .....	29
2.1. Improved reporting versus real changes in impacts and costs ..	30
2.2. Air pollution from road transport .....	37
2.3. Health impacts of air pollution .....	42
2.4. Economic cost of the health impacts of air pollution .....	53
2.5. Road transport's share of the above economic cost .....	62
Notes .....	65
References .....	67
<b>Chapter 3. Rethinking appraisals to mitigate the health impacts of air pollution from road transport</b> .....	73
References .....	78
<b>Tables</b>	
1.1. CAFÉ Programme cost-benefit analysis (CBA), with and without WTP values .....	24
1.2. TSAP cost-benefit analysis (CBA), with mortality in VOLYs and VSLs	25
2.1. Selected risk factors ranked by attributable burden of disease in 1990 and 2010 .....	33
2.2. Selected risk factors ranked by attributable burden of disease in selected regions in 2010 .....	34
2.3. Deaths, YLLs and DALYs from ambient air pollution in 2005 and 2010 .....	44
2.4. Deaths from ambient air pollution in OECD countries .....	46

2.5. Years of life lost (YLL) from ambient air pollution in OECD countries in 2005 and 2010 . . . . .	47
2.6. Disability-adjusted life years lost (DALYs) from ambient air pollution in OECD countries in 2005 and 2010. . . . .	48
2.7. Deaths from ambient air pollution in China in 2005 and 2010. . . . .	49
2.8. YLLs from ambient air pollution in China in 2005 and 2010 . . . . .	49
2.9. DALYs from ambient air pollution in China in 2005 and 2010 . . . . .	50
2.10. Deaths from ambient air pollution in India in 2005 and 2010 . . . . .	50
2.11. YLLs from ambient air pollution in India in 2005 and 2010. . . . .	51
2.12. DALYs from ambient air pollution in India in 2005 and 2010 . . . . .	51
2.13. Economic cost of deaths from ambient air pollution in OECD countries in 2005 and 2010 . . . . .	58
2.14. Indicative estimate of the economic cost of health impacts from ambient air pollution including morbidities in OECD countries in 2005 and 2010 . . . . .	59
2.15. Economic cost of deaths from ambient air pollution in China in 2005 and 2010 . . . . .	60
2.16. Indicative estimate of the economic cost of health impacts from ambient air pollution including morbidities in China in 2005 and 2010 . . . . .	60
2.17. Economic cost of deaths from ambient air pollution in India in 2005 and 2010 . . . . .	61
2.18. Indicative estimate of the economic cost of health impacts from ambient air pollution including morbidities in India in 2005 and 2010 . . . . .	62
2.19. Indicative estimate of road transport's share of the economic cost of deaths from ambient air pollution in EU24 in 2010 . . . . .	64
2.20. Indicative estimate of road transport's share of the economic cost of health impacts from ambient air pollution including morbidities in EU24 in 2010 . . . . .	64
2.21. Indicative estimate of road transport's share of the economic cost of deaths from ambient air pollution in OECD countries in 2010. . . . .	64
2.22. Indicative estimate of road transport's share of the economic cost of health impacts from ambient air pollution including morbidities in OECD countries in 2010. . . . .	65
3.1. TSAP CBA; costs, benefits and B/C ratios . . . . .	75
3.2. Car, bus and rail revenues in relation to marginal social costs in Great Britain. . . . .	77

## Figures

2.1. Estimates of deaths from ambient particulate matter (PM) pollution	32
2.2. The economic cost of the health impacts of air pollution from road transport: Three links in the chain . . . . .	35