



## Key Messages

- **Moving from the current 20% EU emission reduction target to a 30% internal emission reduction target would result in substantial positive effects on public health in the Member States**

The study analysis shows that savings resulting from the avoidance of premature death due to air pollution, days lost to ill-health, hospital admissions, medical consultations and medication would total up to €30.5 billion per year in 2020. Health benefits for individual Member States are estimated at up to €8.1 billion (Germany) and €4 billion (Poland). These savings are more than 50% higher than the benefits already anticipated as a result of the implementation of the 20% emissions cut, estimated at up to €52 billion in 2020. (Figures on national health benefits resulting from the 0-20% emission reductions are not available.)

- **The benefits to public health of action on climate change quantified in this report are roughly two-third the costs of implementing a 30% domestic target on greenhouse gas emissions**

The European Commission estimates the cost of moving from the 20% to the 30% internal target at €46 billion per year in 2020. Our technical report estimates the additional co-benefits for health of the 30% domestic target at up to €30.5 billion per year in 2020<sup>9</sup>.

The estimate from our analysis is most conservative; it assesses only a small proportion of overall health benefits arising from climate policies. It does not take into account the health benefits of avoiding climate change nor the co-benefits of other climate change policy, such as 'active transport', which would produce gains for cardiovascular disease, diabetes, cancer and depression<sup>10</sup>, which would increase the benefits further.

- **Failure to act now means foregoing potential benefits**

Beginning to move to the 30% target earlier rather than later brings much greater benefits. By way of illustration, if action starts in five years time, instead of today, it will mean the loss of more than half the health benefits. On the basis of the upper estimate of health benefits, €100 billion-worth of health benefits would be lost. The cumulative health benefits of acting immediately will reach €163 billion in 2020 compared with only €63 billion if action is delayed until 2015. Thus, by acting now instead of delaying until 2015, the future health benefits are more than doubled.

- **Health benefits are spread throughout EU countries**

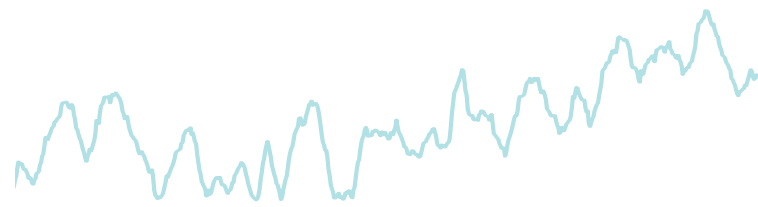
The health benefits of moving to 30% domestic emission cuts in the EU will be spread across EU countries. The analysis shows that some countries stand to benefit more than others and that positive benefits are conclusive for almost all countries. Translated into monetary terms, these could result in important health-cost savings. (For full details, see Technical report, Figure 3 and Appendix 1.)

*The findings should prompt much greater focus on the health benefits of stronger EU action on climate change.*

<sup>9</sup> European Commission Communication, May 2010, COM (2010) 265 final. Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage. <http://ec.europa.eu/environment/climat/pdf/2010-05-26communication.pdf> (accessed 14.08.2010)

<sup>10</sup> The Lancet Series, Health and Climate Change, November 2009, "Public health benefits of strategies to reduce greenhouse gas emissions: urban land transport", <http://www.thelancet.com/series/health-and-climate-change> (accessed 13.08.2010)

*Air pollution can make existing heart conditions worse and can cause cardiovascular problems amongst vulnerable groups.*



- **A 30% domestic or 'internal' reduction in greenhouse gas emissions brings bigger health benefits**

By opting for the internal 30% target on emission reductions (i.e., without offsetting), the future health benefits are doubled. Health benefits for the internal 30% target are estimated to be in the range of €10.5 - €30.5 billion Euros per year in 2020 compared with benefits associated with a 'flexible' 30% target of only €5 - 14.6 billion.

- **Citizens' well-being and the costs of healthcare should be highlighted in climate change discussions**

Protecting public health through strong climate change policy will increase life expectancy and bring about a quality of life in which the air is cleaner and ill-health and discomfort associated with poorer air quality is reduced.

- **Governments can avoid some of the major financial burden of future ill-health**

Currently, healthcare spending on respiratory disease in the EU countries averages €95 per capita per year<sup>11</sup>. According to the European Lung Foundation, the burden from respiratory diseases on the healthcare budgets within the EU is approximately €47.3 billion<sup>12</sup>. These direct costs of respiratory diseases are estimated to make up approximately 6% of the total healthcare budget.

The annual economic burden of respiratory diseases in Europe is estimated to be approximately €102 billion or €118 per person. This figure takes into account work days lost as well as hospital and other medical costs<sup>13</sup>. It does not take into account the value of days of restricted activity due to ill health but which may not be "working days".

The European Commission's recent Communication estimated that 230,000 people would die prematurely following exposure to air pollution each year by 2020. Premature deaths, health care and medication associated with air pollution were estimated at the equivalent of 1.5-4 per cent of EU Gross Domestic Product<sup>14</sup>.

Such considerations are important to the design of climate change and other policies, particularly within the context of an aging European population and rising healthcare costs.



<sup>11</sup> The four major respiratory diseases: chronic obstructive pulmonary disease (COPD), asthma, pneumonia and tuberculosis (TB). Inpatient costs are estimated at €17.8 billion and outpatient care €9.1 billion; prescription drugs €6.7 billion and premature mortality and rehabilitation €20.0 billion.

<sup>12</sup> European Lung Foundation. Lung diseases: Economic impact. <http://www.european-lung-foundation.org/index.php?id=155> (accessed 13.08.2010)

<sup>13</sup> European Lung Foundation. Lung diseases: Economic impact. <http://www.european-lung-foundation.org/index.php?id=155> (accessed 13.08.2010)

<sup>14</sup> European Commission Communication, May 2010, COM (2010) 265 final. Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage. <http://ec.europa.eu/environment/climat/pdf/2010-05-26communication.pdf>



- **Investment in climate change policy promotes productivity through better health**

Moving to a 30% domestic target will additionally avoid almost 3 million working days lost annually to respiratory disease. Investing in health is investing in long-term human capital.

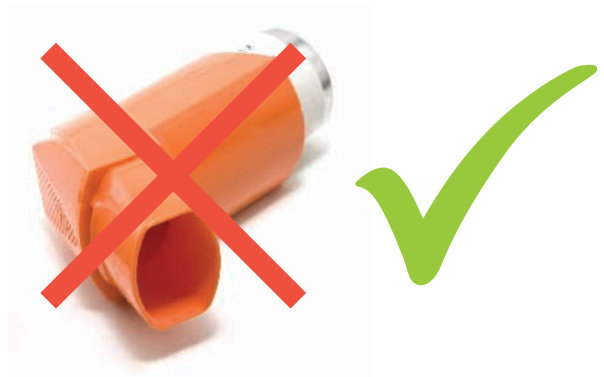
A healthy society and active workforce will be key determinants of sustainable development, productivity and economic growth and thus is a key condition to deliver the EU's 2020 Strategy.

- **Investment in climate change policy brings other benefits**

Early action on further reductions in greenhouse gas emissions will also ease the regulatory burden on EU countries. The higher target on climate change policy would contribute to health and environment objectives of the 2005 Thematic Strategy on Air Pollution by bringing forward the date of compliance with existing air quality legislation. The European Commission Communication<sup>15</sup> in May 2010 estimated that the fall in emissions of SO<sub>2</sub>, NO<sub>x</sub> and fine particles (PM) that are the subject of this report would lead to reductions in air pollution control costs of €5.3 billion per year.

Employment in green jobs and 'environment-friendly' sectors would also expand more quickly.

CLEANER AIR MEANS LESS USE OF INHALANTS - AN IMPORTANT CONSIDERATION IN AN ERA WHEN THE NUMBER OF CHILDREN AND YOUNG PEOPLE WITH ASTHMA IS RISING.



<sup>15</sup> European Commission Communication, May 2010, COM (2010) 265 final. Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage . <http://ec.europa.eu/environment/climat/pdf/2010-05-26communication.pdf>