

Achieving both economic growth and reduced environmental pressures in the current financial climate



Amsterdam Central Station and trams. The Dutch are leading the world in successfully decoupling environmental impacts from economic growth. iStockphoto/TheHague

During arguably the worst global economic recession since the 1930s, world leaders will meet in Copenhagen later this year to negotiate a Post Kyoto Framework and targets for decoupling economic growth from greenhouse gas emissions.

Since the start of the global financial crisis there have been calls by business interests and media pundits for caution on acting ‘too fast’ on climate change, in case it negatively affects economic growth. Despite this, both the UK and new US administrations have made clear and strong commitments to significant greenhouse gas reductions as part of a new strategy for economic growth.¹ They are confident they can achieve both increased economic growth

and reduced environmental pressures.

This position is well supported. History shows that when governments have introduced regulation, emission trading schemes or other incentives to phase out harmful chemicals or pollutants, significant decoupling of economic growth with that pollutant is achieved. Findings from a number of countries show that achieving this high level of decoupling does not result in negative impacts on economic growth.

A leading example of this has been global and regional efforts to decouple economic growth from sulphur dioxide pollution, and hence acid rain, through first the 1983 Helsinki Protocol and then the United Nations Economic Commission

of Europe Second Sulphur Protocol in 1994. The Second Sulphur Protocol committed nations to targets of sulphur reductions of 50 per cent by the year 2000, 70 per cent by 2005 and 80 per cent by 2010.²

The environmental objective of the Protocol was to bring sulphur depositions in Europe within the critical loads of receiving ecosystem, a fundamental principle of ecological sustainability. The emission reduction required was 80 per cent, a five-fold improvement. Initial perceptions were that it would be hugely expensive, but the arrival of cost-effective low-sulphur fuel, with a range of supporting technologies, altered the affordability situation such that the goal was attainable for significantly less

cost than anticipated – US\$90 per ton rather than \$1000 to \$1500 per ton.

When considering the reductions in associated damage from acid rain, such as costs related to public health and impacts on agriculture and infrastructure (estimated to be in the range of \$1000 to \$8000 per ton), the phase out did not have an overall negative effect on economic growth. And as can be seen in Figure 1, the Helsinki Target commitment to reduce the levels of emissions by 30 per cent from 1980 to 1993 was well exceeded.

This pattern has occurred in numerous cases when governments have brought in effective environmental policy to address reducing pollution and harmful substances, such as air pollutants, ozone destroying chemicals, lead in petrol and asbestos. In most cases, the chemicals and pollution levels have been significantly lowered with negligible negative effect on economic growth, and often have led to a positive effect due to resource efficiencies and health and environmental benefits.

Generally, once such government regulation and policy changes have been made, businesses innovate to significantly bring down the initial perceptions of the costs of action.³

This, together with the fact that the net associated benefits from reduced pollution loads have outweighed the costs of action, means that there is a strong case for a focus on decoupling environment pressures and economic growth.⁴

Figure 2 provides a stylised demonstration of the various trends relevant to decoupling. It is assumed that at the start

1 Smith M and Hargroves K (2008) Time to unleash the power of a green economy. *ECOS* 146, 26–27.

2 UNECE (1994) *The 1994 Oslo Protocol on Further Reduction of Sulphur Emissions*. UNECE. Available at: http://www.unece.org/env/lrtap/sulf_h1.htm. Accessed 15 August 2008.

3 Hodges H (1997) ‘Falling prices: cost of complying with environmental regulations almost always less than advertised’. Economic Policy Institute briefing paper. Available at: <http://www.epi.org/briefingpapers/bp69.pdf>. Accessed 14 April 2007.

4 OECD (2008) *OECD Environmental Outlook to 2030*. OECD. Available at: http://www.oecd.org/document/20/0,3343,en_2649_37465_39676628_1_1_1_37465,00.html. Accessed 22 March 2008.

of the time period, the relative growth rates of both economic growth and environmental pressures are the same so that the trend can be established.

The goal is to first 'relatively' decouple the trends and then 'absolutely' decouple them; however, it is unreasonable to expect that the environmental pressures will reduce to zero. Rather, they will hit a minimum low boundary as economic growth always has some impact. If this lower boundary is still higher than the environment's carrying capacity, then options to offset, remediate or substitute for the damage will need to be developed – represented in the figure as 'enhanced environmental outcomes'. These are coupled with the economic growth, each contributing mutual growth.

More countries are now taking this so-called Decoupling Agenda very seriously, inspiring a new wave of emissions reduction efforts

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across technology development, institutional reform, education and R&D, and business strategy. Entire nations, such as Iceland, Norway and Costa Rica, have even committed to the aspiration of becoming net climate neutral, subscribing to the case that rapid decoupling of economic growth and greenhouse gas emissions can be achieved.

After the 1970s oil shocks, for seven years after 1979, USA GDP rose by 27 per cent, oil consumption fell by 17 per cent and net oil imports from

the Persian Gulf fell by 87 per cent. This was not just because of higher oil prices, but also because the US Government worked with the US car manufacturers in the late 1970s to mandate more fuel-efficient cars.

Another strong example comes from California, where they have managed to decouple GDP from the typically rising electricity demand. Figure 3 shows that through its strong climate change policies, California has achieved significant reductions in electricity consumption per capita compared to the rest of the USA, an estimated net saving of US\$1000 per family so far.⁵

Finally, one OECD country – the Netherlands – is achieving absolute decoupling of economic growth across all its major environmental areas – including greenhouse gas and other waste production, and freshwater extraction. This provides an important, viable example of

the process to policy makers.

As the world again debates the merits and strategies to significantly reducing greenhouse gas emissions, such success stories show that with appropriate government policy and economic incentives to drive innovation, it is indeed very possible to achieve significant reductions in environmental impacts while fostering economic growth. Let's move forward.

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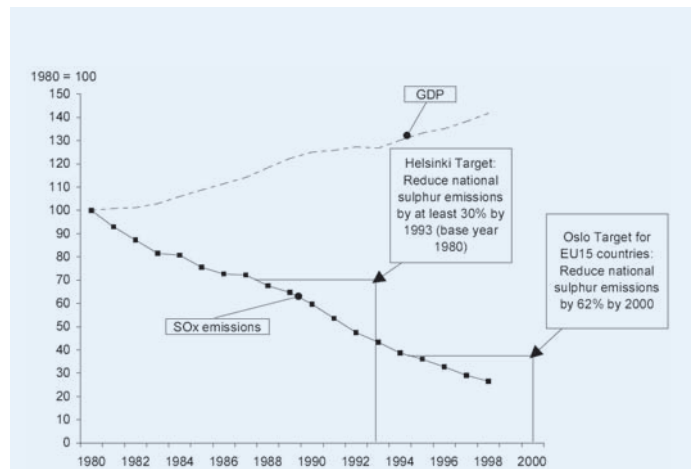


Figure 1 Achievement of targets of UN-ECE Convention on Long Range Transboundary Air Pollution (CLRTAP) by 16 member countries party to the Helsinki Protocol. Source: OECD (2002)⁶

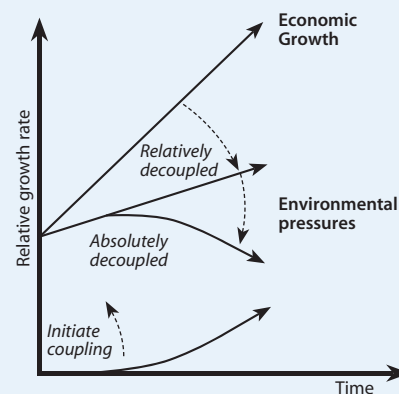


Figure 2 Conceptual and stylised representation of a decoupling graph. Source: Smith M and Hargroves K (2009)⁷

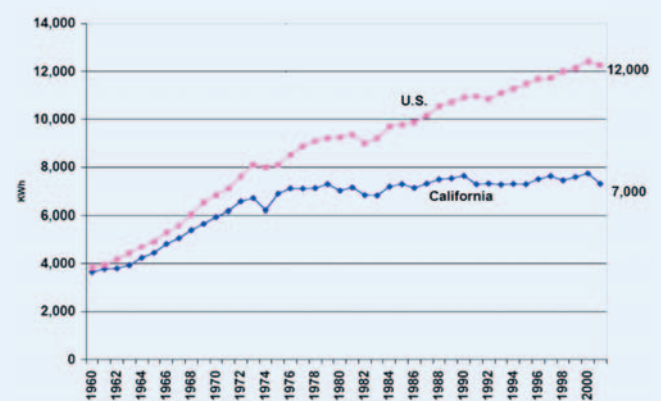


Figure 3 Total per capita electricity use in California, 1960–2001. Source: Shirley W (2006)⁵

More information:
Smith M and Hargroves K (2009) *Cents and Sustainability: Decoupling Economic Growth from Environmental Pressures*. Earthscan, London (in press). <http://www.naturaledgeproject.net/centsandsustainability.aspx>

5 Shirley W (2006) 'Decoupling utility profits from sales'. Prepared for Arizona Decoupling Stakeholder Meeting, Regulatory Assistance Project (RAP). Available at: http://www.raponline.org/Slides/Wayne_Shirley_AZ_Decoupling.pdf. Accessed 2 June 2007.
6 OECD (2002) *Indicators to Measure Decoupling of Environmental Pressure and Economic Growth*. OECD, Paris.
7 Smith M and Hargroves K (2009) *Cents and Sustainability: Decoupling Economic Growth from Environmental Pressures*. Earthscan, London (in press).