

Balancing **living standards** and environmental pressures

CSIRO's Dr Heinz Schandl and the Department of Climate Change's Dr Steve Hatfield Dodds explore the notion of 'decoupling' economic growth and environmental degradation.

Since the 1950s, all OECD countries have experienced rapid growth in economic activity and standard of living. This has come at a cost, however, with the increased use of resources, resulting in greater environmental pressures, greenhouse gas (GHG) emissions, and consumer waste.

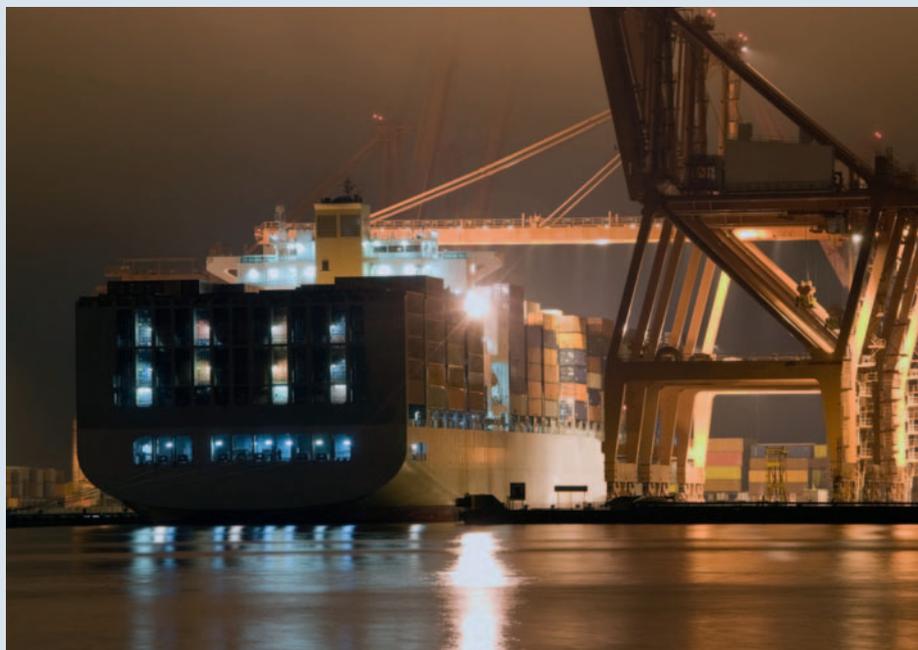
While growth in global resource use and emissions was, until recently, driven by wealthy industrial countries, today's main drivers are the rapidly developing economies of China, India and Brazil.¹

This has ratcheted up the scale and speed of global resource use, with today's patterns of production and consumption hitting the limits of what the planet can offer and sustain. Climate change, water and food availability, and peaking global oil supply are converging rapidly in an unprecedented manner. The global community seems to be at a turning point. The need to make decisions is urgent, yet the information required for decision-making is incomplete.

Accounting for resource use and emissions

Good resource management relies on the availability of comprehensive information systems that track resource stocks and use, and the generation of emissions and other waste – such as agricultural crops, timber, ores, construction minerals and fossil fuels. The standard framework developed to account for resource use and emissions – along with data and indicators from OECD and some developing countries – tell us that, globally, we are using 50 thousand million tons of resources per year, or an average of 8.5 tonnes per capita.

Australia has a distinctive pattern of resource use² because it supplies relatively high volumes of natural resources – coal, ores and agricultural products – to the world market. Measured per capita, Australia's domestic resource extraction is about twice that of the United States and three times higher than the OECD



Today's patterns of production and consumption are reaching the limits of what the Earth can sustain due to the push for economic growth at the expense of the environment. istockphoto

average. Australia's physical trade balance shows the country to be a big net exporter of resources; most OECD countries, in contrast, import most of their resources, depending on other countries to satisfy their resource demands.

As a result, Australia's domestic resource consumption is twice as high as the OECD average. This translates into high per-capita waste volumes and CO₂ emissions.

The key: integrating economic and environmental policy

Economic growth and resource use can be decoupled from environmental pressure by well-designed public policies. The philosophy of eco-efficiency and dematerialisation, for example, outlines a path to achieving economic growth and wellbeing, while using fewer resources and generating fewer emissions in meeting our demands for food production, transport, construction and housing and energy.

Integrated economic and environmental policies *can* reconcile continuing increases in living standards with considerable reductions in resource use and emissions. But major changes in policies will require

better understanding of environmental processes, development of appropriate technologies, and a consensus in favour of action to change our management practices and lifestyles.

International effort to decouple growth and the environment

In November 2007, the United Nations Environment Programme (UNEP) launched the International Panel for Sustainable Resource Management whose objective is to find ways of breaking the link between economic growth and environmental degradation.

UNEP's view is that while climate change tops today's environmental agenda, the world faces myriad other problems caused by wasteful production and consumption patterns and related environmental, efficiency and equity issues.

Australia can play a part in this international effort. By developing new policies that will improve our resource efficiency, we can learn to 'do more with less' and be part of a new economic paradigm that will account for the living standards of future generations, as well as our own.

More information:

UNEP Sustainable Consumption & Production Branch, www.unep.fr/scp/

¹ Schandl H, Fischer-Kowalski M, Grunbuhel C and Krausmann F (2008). 'Socio-metabolic transitions in developing Asia'. Socio-Economics and the Environment in Discussion. CSIRO Working Paper Series, No. 2008-05. www.csiro.au/resources/SEEDPaper15.html

² See diagram p. 27: Schandl H, Poldy F, Turner G, Measham TG, Walker D and Eisenmenger N (2008). 'Australia's resource use trajectories'. Socio-Economics and the Environment in Discussion. CSIRO Working Paper Series, No. 2008-08. www.csiro.au/resources/SEEDPaper18.html