Editorial

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TAX AND THE BIOSPHERE

For thousands of years people have enjoyed the benefit of the "magic rock" – coal, and since the late 19th Century, its compatriot – oil. Coal enabled the Vikings to winter in northern France and change the course of society in Europe. It fired up the Industrial Age of steam powered factories, ships and railways. Oil sped up industrialisation and enabled the development of the internal combustion engine, which in turn enabled great production and wealth.

Unfortunately, as with many blessings, they are accompanied by great curses. Wars became industrialised, and the 20th Century saw the infliction of industrialised human misery and great destruction across the planet. Wealth became focused such that some populations accumulated great fortunes, but often inflicted great poverty on others. The world is coming to realise the insidious nature of fossil fuels and is calling for action to reduce the energy reliance on the "magic rock" and its friends. However just as the monkey refuses to let go of its shiny prize, some of those benefitting from the glimmer of the "magic rock" are ignoring the dangers.

Today mankind faces its greatest threat of global extinction, not only to human life but to all of the Earth's oxygen reliant biosphere. The threat is that of a warming planet caused from the extraction of fossil fuels buried deep within the bowels of the Earth, to be burned in the atmosphere which powers modern societies and their industries. The exhaust gases produced from that practice are termed greenhouse gases (GHGs) as they change the composition of the atmosphere and produce a "greenhouse" effect that warms the Earth's biosphere.

Climate scientists have been warning the world's population and governments that action must be taken to significantly reduce GHG emissions and to remove existing GHGs from the atmosphere. This special issue looks at the role taxation systems can work to help achieve that goal.

I welcome readers to this special issue on the application of taxation systems to tackle GHG emissions and to combat global warming. It looks at four articles that focus on the role that taxes can play in changing social behaviour to reduce GHG gas emissions accumulated in the atmosphere to protect the environment and restore the atmospheric balance to pre-industrial ages.

The articles look at how, in addition to the traditional role of taxes being used to fund government activities, taxes can also function as economic drivers to alter social behaviour. In the past some taxes, such as tobacco and fuel excises, have been used not only raise revenue but also to reduce demand for "undesirable" products. These articles examine ways in which taxes can be used in a similar fashion to reduce GHG emissions and to combat climate change.

The first article considers displacing fossil fuelled electricity generation with non-polluting renewable energy sources. Fullarton and Davies examine the *Renewable Energy (Electricity) Act 2000* (Cth) and focus on the Australian Renewable Energy Target and how the act impacts on the electrical generation industry to dilute GHG emissions. They consider the market of trading "carbon credits", created under the provisions of the act, to be a system of taxation, on fossil fuel-based (polluting) energy generators, and a system of subsidisation which encourage renewable energy-based (non-polluting) electricity generation.

The second article looks at using tax revenue raised from Australia's petroleum taxation payments to pay for existing GHG emission damage to the global atmosphere. Kraal and Boué ask about the likelihood of existing petroleum taxation regimes in Australia and the United Kingdom (UK) as a source of funds to

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the United Nation's "loss and damage fund" to ameliorate the impacts of climate change on developing countries and to provide future environmental sustainability. They overview Australia's petroleum resource rent tax and suggest that statistics indicate low levels of tax collections in comparison to high royalty collections from petroleum in jurisdictions such as Qatar.

They also look at the UK's petroleum revenue tax and suggest it has passed the point of capability to contribute funds to mitigate the environmental impacts from its gas industry is overviewed, including its characteristic principle, maximisation of production. They discuss the significantly high levels of carbon emissions from the gas industry in both Australia and the United Kingdom and acknowledge disrupters to transition to the net zero goal, such as the war in the Ukraine, as barriers in the path toward lower emissions.

It has been identified that the transport sector contributes a significant proportion of GHG to the global atmosphere and in the third article Mortimore examines the effectiveness of the Australian Government's introduction of amendments under the *Treasury Laws Amendment (Electric Car Discount) Bill 2022* (Cth), which exempts all zero or low-emission vehicles from fringe benefits tax. She states that the Australian Government is relying on that policy reform to encourage a greater uptake of electric vehicles that will contribute to its ambitious emission reduction target. She finds that an understanding of the influential behavioural economic considerations of future electric vehicle buyers are critical factors when reforming blunt taxation policy instruments.

Finally, Stoianoff, Walpole and Tran-Nam present an evaluation of what they consider to be a neglected aspect of Australia's climate change policy, that of the role of income tax measures (including tax expenditures) in protecting the environment and reducing further GHG emissions/accumulation in the atmosphere. They seek to develop a two-fold evaluation framework for tax expenditures. First, they identify some income suitable tax measures relating to environmental protection in Australia; and second, they conduct a preliminary analysis of these income tax measures to present an overview of the theoretical considerations involved in their evaluation.

I commend this eclectic range of studies to our readers. They provide further insight into using an economic factor – taxation, to combat a threat to our natural environment – the production of GHG emissions.