**Accepting the realities of the earth system**

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Abstract

Since its inception in the 18th century, economics has evolved from being principally a theologically based ideology, to the mathematically driven science it is today. Based on theories of utility, resource allocation, and the pursuit of profit, these theories have changed little from those described in the early writings of Adam Smith, Jeremy Benson, and David Ricardo. Until about 1870, the main thrust of the writing of economists was about economic growth, and economic freedom to compete for maximum profit.

While of course, as the world both expanded in one sense, yet contracted in another, the discipline of economics expanded to cover ever-increasing areas of interest, where international trade, labour markets and exchange rate rules become more dominant in the interface between economics and government policy.

Today, in the early part of the 21st century, conditions in the world are vastly different to those of the early classical economists, but curiously, the main thrusts of government remain the pursuit of economic growth, free markets, and freedom to exploit resources for maximum gain. The major mistake made by the founding fathers of economics was failure to recognise the role of the environment in the functioning of the economic system. As Adam Smith innocently, yet erroneously put it, ‘nature is a free good’.

When that was written back in the 18th century, nature did indeed seem like a ‘free good’, in the sense that there appeared to be no scarcity, with rich farmland, extensive forests and plentiful water just waiting to be exploited by the entrepreneurial spirit of the day. Today this is very different. On every continent the scarcity of nature is abundantly clear for all to see.

In this paper, the consequences of this error of classical economics is considered, with some suggestion as to how modern economic systems can and must adapt urgently the reality that nature is most certainly **not** a free good.

Speaker Biography

Associate Professor Caroline Sullivan is an environmental and ecological economist specialising in interdisciplinary research linking biophysical and social sciences. She has 20 years of research experience in the fields of natural resources research, water and wetlands, valuation of ecosystem services, transboundary water management, international development, and indigenous people’s use of natural resources. She is internationally known for her work on water and poverty, and the development of composite indices to support Integrated Water Resources Management (IWRM). She has undertaken research contracts for the EU, the UK Government, the World Bank, the African Development Bank, FAO, UNESCO, and World Vision Australia.