
Introduction

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Biographical notes: Julian David Hunt is a Postdoctoral Research Scholar at the Energy and Water Programs of IIASA. He joined IIASA from the National Commission for Nuclear Energy in Brazil where he was working on a hybrid nuclear generation and seawater desalination project. He holds a DPhil in Engineering Science from the University of Oxford, where he developed a decision support system to optimise energy and water projects in the UK. He also holds a BEng in Chemical Engineering from the University of Nottingham. Previously, he worked at the Energy and Climate Change Branch of UNIDO.

Technological innovation has been one of the most important forces behind worldwide improvements in the quality of life. The means by which we manage and utilise natural resources; the processes used to produce goods and services (electricity, power, heating, cooling, and water); the ways in which we communicate and interact with each other and disseminate information are constantly changing and improving.

However, these technological innovations have also contributed to the depletion of natural resources, deforestation, reduction of biodiversity, global warming and other issues that severely impact the world's environment and can considerably reduce the options for future humanity to enjoy the same comfort that we enjoy today. This special issue will focus on presenting innovative technologies, processes, paradigms, services and products with the intention of providing adequate services to society which are more efficient and environmentally-friendly, which reuse natural resources, which emit less CO₂ and which are appropriate for helping the world reach the sustainable development goals set by the UN.

Innovation does not only involve the technology itself, but also the methods used to implement the technology and the impacts on other aspects of society, environment and the economy. In light of this, this special issue invites authors to present papers that propose innovative technologies, reviews on innovative technologies, impact analysis of innovative technologies and study how they contribute to the development of a more sustainable and fair society.