

## ENVIRONMENTAL STANDARDS

### Robert Lowe

*Professor of Energy and Sustainability in the Built Environment, Leeds Metropolitan University, UK*

**Keywords:** local air pollution, trans-boundary pollution, global pollution, smog, acid rain, ozone depletion, climate change, chlorofluorocarbons, carbon dioxide emissions, technology, regulatory systems, Montreal Protocol, Kyoto Agreement, historical perspective

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### Summary

This entry begins with a brief summary of the principles and economic theory of environmental standards. It then charts the historical development of environmental standards from pre-industrial times to the present. Examples given include efforts to control urban air pollution in the late 19<sup>th</sup> and first half of the 20<sup>th</sup> centuries, and the development, since the early 1970s, of regimes to control regional and global problems of acid rain and the depletion of the ozone layer. The final part of the entry deals with the difficult and so-far unresolved problem of developing standards to control climate change.

The history of the development and enforcement of environmental standards is revealed as a history of technological development, of the development of political consensus, and of the development of governmental and legal structures. The development of an effective control regime for climate change is likely to require significant further developments in all three areas.

### 1. Introduction

The purpose of this entry is to present a summary of the goals, history, theory and context, and a brief discussion of the possible future of environmental standards. Environmental standards play a major part in the control and reduction of environmental impacts from human activities. Such activities have had and, in parts of the world,

continue to have direct and devastating impacts on human health. The control of these impacts has, until recently and for obvious reasons, been the primary objective of environmental standards. Nevertheless, as the intensity and geographical extent of human activity has increased, the focus of environmental standards has necessarily broadened to include impacts on the local, regional and ultimately global systems that underpin human life.

Environmental standards control relationships between people, individually and collectively. The history of environmental standards is therefore a history of the development of relationships between individuals, groups and interests within society. The effective development and implementation of environmental standards requires the existence of government and legal structures within which these relationships can be expressed, contested and reconciled, and through which they can be enforced.

Environmental standards are, in almost all cases, developed in response to problems that emerge from the implementation of new technology. They ultimately operate by changing the mix of technologies in use and have a powerful effect on the direction of development of new technology. Systems for implementing environmental standards are themselves an aspect of technology. Thus the development of environmental standards is an integral part of the history of technological development.

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### Biographical Sketch

Originally trained as a physicist, **Robert Lowe** is Head of the Buildings and Sustainability Group at Leeds Metropolitan University. He is also a member of the FMNectar consortium which is supporting the development of UK energy efficiency standards over the next five years. His publications range from energy and environmental policy through impacts of climate change to the effects of airtightness in dwellings. He has directed numerous laboratory, field and desk studies relating to the energy performance

of housing and is currently leading a collaborative project to evaluate an enhanced energy performance standard for new UK housing. He is a member of the editorial board of *Building Research & Information* and recently guest edited a special issue on adapting to Climate Change. Lowe was appointed to a personal chair in 2001.

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