

# *Dictionary of Environmental Science and Technology*

Fourth Edition

ANDREW PORTEOUS



John Wiley & Sons, Ltd



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Science and Technology*

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By the rubbish in our wake, and the noble noise we make,  
Be sure, be sure, we're going to do some splendid things!

Rudyard Kipling, '*The Road Song of the Bandar-Log*'

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**To Margaret, for forty-five years of support,  
care and love. And to Neil for the future**





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## *Preface to Fourth Edition*

This book is in effect, my ‘*apologia pro vita mea*,’ thus all errors, omissions and commissions are down to me.

I have lived and breathed responsible environmental management all of my professional life, which commenced at the Thayer School of Engineering, Dartmouth College, USA, in 1964. The School instilled in me a thorough grounding in rational resource management, engineering rigour, and the necessity for accountable professional conduct.

It was with this background and in the belief that too much environmental illiteracy abounded that I essayed my first work *The Environment – A Dictionary of the World around Us*, published by Arrow in 1976. This was written in association with my friend and colleague Geoffrey Hollister, the visionary founding Dean of The Open University’s Technology Faculty. Subsequently, this oeuvre metamorphosed into the current series of Dictionaries.

This edition would not have been possible without the unstinting help of my colleague and friend Dr Suresh Nesaratnam, Senior Lecturer in Environmental Engineering at The Open University, allied with the dedicated secretarial assistance of Mrs Rozy Carleton.

There is little left to say that has not been covered in the previous Prefaces except to bemoan (again) the levels of environmental ignorance and posturing of our political masters – *plus ça change*.

I conclude with the Persian proverb which has guided me since I discovered it in Dartmouth College Library in 1965.

‘God will not seek thy race, nor will He ask thy birth. Alone, He will demand of thee “What hast thou done with the land that I gave thee?”’

*Persian Proverb  
Discovered in Dartmouth (USA) College Library (1965)*



## *Preface to Third Edition*

The need to consider the environmental impacts of any industrial activity is now taken for granted.

Advances in environmental literacy have led to much more questioning of, and accountability from, environmental professionals. Both are to be greatly welcomed.

This text has yet again been expanded to aid the above goals. I am gratified that it still is found to be useful.

My grateful thanks to all my colleagues (listed in the preface to the first edition) plus new colleagues, Dr Suresh T. Nesaratnam and Dr Stephen Burnley.

My secretary Mrs Morine Gordon has, as ever, helped the gestation immensely.

The holistic view of Lavoisier (1743–1794):

*Rien ne se perd, rien ne se crée, tout se transforme*

[Nothing is lost, nothing is created, everything is transformed] still holds true. It is how the transformation is effected that counts.

Andrew Porteous  
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*The Open University*  
*May 2000*



# *Preface to Second Edition*

Time marches on as they say, and this second edition is my way of documenting advances in environmental practices, knowledge and perceptions.

The opportunity has been taken to greatly expand the contents. I hope it meets with your approval.

My grateful thanks to my colleagues and my secretary Mrs Morine Gordon for typing this second edition.

Balaam (Numbers, Chapter 24), 'I came to curse [this task] but stayed to bless it!'

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