

Preface

As the stride of industrial activity strengthened and the understanding of collective effects grew, a pollution control paradigm became the dominant approach to environmental management. This new paradigm of pollution prevention will serve as the epoch of state and local environmental dogmas. The challenge is to switch from past environmental regulations based on pollution control and government authorized regulations to future environmental procedures which would be based on pollution prevention, source reduction, recycling and waste minimization. It will require a new social setup amongst environmental, industrial and regulatory interests.

The current approach has failed to prevent global contamination and environmental damage because it underestimates the scale, complexity and diversity of the hazards of chemical pollution. There exists an urgent need for fundamental shifts in the mode of chemical assessment and policies.

A new framework should focus on chemical classes rather than individual substances, and the conversion of industrial processes to prevent the production and use of persistent and bioaccumulative substances. The default state of pollution policy must be shifted in the face of uncertainty from permission to restriction.

To preserve public health, environmental strategies must be developed to understand pollution prevention ethics and eliminate or minimize waste production. Preventing pollution, rather than devising more costly control methods, is key to industrial competition and environmental health and sustainability.

The advantages of pollution prevention include improving the effectiveness of managing reduced waste streams, minimizing the uncertainty associated with the environmental impact of released pollutants, avoiding transfers of released pollutants and protecting natural resources. Prevention of pollution also educates the public on matters of waste management, and promotes regulatory inspections of industrial waste management practices.

For any comprehensive system to work, governments must encourage and participate in recycling, consumption of recycled products and investment in recycling technologies. With this perspective, the paradigm associated with environmental protection has been changing. Educational programs and training activities must be available to prepare people for this coming paradigm shift.

This book will provide insight to readers on various types of pollution affecting our environment, its health hazards on our living system and preventive ways to keep a check on the proliferating menace of pollution. It discusses diverse topics on pollution prevention and waste minimization leading towards zero discharge.

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