

Sustainability of the environment and avoidance of pollution

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Abstract

Meeting our present demands without endangering the capacity and right of future generations to satisfy theirs is what is meant by environmental sustainability. Opportunities to avoid soil, water, and air pollution, limit waste generation and the use of dangerous products, and save and reuse resources as much as possible should be found and taken advantage of. A major concern for a sustainable environment is environmental pollution and its effects on human health (United Nations General Assembly, 1987). The goal of sustainability and sustainable development is to strike a balance between competing demands, the need to advance economically and technologically, and the need to preserve the surroundings in which we and others live. Sustainability is not just about the environment (Kates et al. 2005); it's also about our health as a society, making sure that no individuals or aspects of life are negatively impacted by environmental laws; it's about looking at the long-term consequences of human behavior and considering ways to improve it (World Commission.

Development and the Environment (1987). The word "sustainability" has expanded to include almost every aspect of life on Earth, both locally and globally, and throughout a range of time periods. Sustainable biological systems include long-lived, healthy wetlands and forests. Since the beginning of time, invisible chemical cycles have supported life by redistributing carbon, nitrogen, oxygen, and water across the world's living and non-living systems. Natural ecosystems have deteriorated as the world's population has grown, and a shift in the natural cycles' equilibrium has had detrimental effects on both people and other living systems (Hawken 2007).

Introduction

Pollution prevention reduces the amount of pollution generated by a process (industry, agriculture, or consumers). Pollution-control strategies, in general, seek to manage a pollutant after it is emitted and reduce its impact upon the environment; the pollution prevention approach, however, seeks to increase the efficiency of a process (Sherman et al. 2016), hence reducing the amount of pollution generated at its source is the preferred strategy, some professionals also use the term pollution prevention to include pollution reduction.

With increasing human population, pollution has become a great concern. Pollution from human activities is a problem that does not have to be inevitable. With a comprehensive pollution prevention program, most pollution can be reduced, reused, or prevented. Reducing and managing pollution may decrease its health impacts (Thiel et al. 2015).

Pollution prevention however is a key issue to sustainability. Pollution results from waste. The best way to deal with pollution is to prevent it from being created in the first place. This means finding new efficiencies, doing things smarter, and valuing every resource. Understanding how waste is produced and how it can be minimized, or even prevented, is the first step to reduce waste and protect our environment; in that way, pollution prevention is an essential component of sustainability.

Fundamental ideas of preventing pollution rather than fixing problems are essential for efficient, economically viable manufacturing, providing services, and addressing many environmental problems (Jorgenson and Wilcoxon 1990).

With new business tools, new materials, and new approaches, it is expected to innovate methods to reduce waste. Prevention is the first priority within an environmental management hierarchy that includes prevention, recycling, treatment, and disposal or release. Pollution prevention, however, requires a cultural change, one which encourages more anticipation and internalizing of real environmental costs by those who may generate pollution (United States

Environmental Protection Agency n.d.).

It is our duty to use our knowledge to take actions that safeguard both the environment and human health. Every article included in this journal issue discusses strategies and tactics recommended for preserving a sustainable environment with all of its constituent parts by preventing and treating pollution. They were chosen from the presentations during the International Conference on Integrated Management of the Environment (ICIME) congress, which was designed as a unique forum for knowledge sharing among Euro-Mediterranean scholars. The primary goal was to discuss the many strategies used to mitigate the harmful effects of pollutants on the environment and human health, as well as the recent accomplishments of local researchers working to prevent, mitigate, and manage pollution issues. Finding remedies for the detrimental effects of pollution brought on by human activity is the responsibility of regional scientists. For this reason, the ICIME conference took place in Sousse, Tunisia, from September 25–28, 2016. This event brought together over 250 participants to exchange fresh discoveries and talk about how these new processes may be used to create practical methods for sustainable development. A thorough and open selection process has been used to choose the studies that will be included in this special issue. The attending researchers' intensive and productive conversation demonstrated their shared concern for tackling the waste and remediation issue together. While certain issues may be unique to a particular area, similarities in diagnosis and remediation techniques showed that the scientific community is responsible for providing answers for long-term environmental preservation. Therefore, we would like to express our sincere gratitude to the scholars who attended this ICIME edition and congratulate the authors whose papers were published. We hope that there will be many opportunities to connect and share ideas and new scientific discoveries. We are grateful to all writers who actively contribute to the success of the conference. We thank the editorial staff especially Dr. Philippe Garages, chief editor of Environmental Sciences and Pollution Research, for their unending assistance. during the review process of this special issue.

Special Issue is intended to improve our understanding of the current research and achievements in the broad field of sustainable environment and pollution prevention management. It includes, but is not limited to:

Environmental assessment

Soil, water, and air pollution

Pollution prevention and treatment

Assessment of pollution impact on the environment and on health

Sustainable environment

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