

Preface

Post industrialization, complexity of the processes and the technology that makes possible the production of variety of consumer products to support the growing population, has been increasing. Additionally, the perils of global warming and climate change have started to manifest in the form of severe environmental and health impacts.

The environmental impacts are clear in the form of shift in seasonal cycle, flash floods, droughts, scarcity of potable water, etc. As per World Health Organization (WHO) between the years 2030 and 2050, climate change is estimated to cause 250,000 additional deaths per year. The number of patients that are reporting health problems emanating from consumption or coming in contact with contaminated air and water is increasing every year.

It is estimated that world population will grow to 9.1 billion by 2050. In addition, economic progress, especially in developing world, would result in growing demand for natural resources. More number of people will be employed in manufacturing and allied sectors and exploitation of already stressed natural resources will reach its limit. Therefore, the importance of synergy between man and nature and man and his work environment cannot be overlooked. It is essential that sustainable means and ways are developed to meet the demands of growing population.

The importance of harmony between man and the environment is unquestionable. The importance of this harmony is even greater in the current scenario because, unlike past, the capacity of the environment to assimilate pollution caused by anthropogenic activities has reached its limit. We are now witness to global warming and climate change. This scenario is going to become even worst if course correction is not done immediately. Major stake-holders around the world are chalking out the plan to cut carbon emission and check global warming and climate change.

The same harmony is essential between man and his work environment. Prolonged exposure to hazards at work place and lack of ergonomics results in plethora of work related problems that call for immediate attention.

A major objective of this publication is to update ourselves with the latest developments in the field of health and environment safety, and inform on related opportunities and challenges.

This volume presents select papers on advances in the field of health and environment safety which were presented at the International conference on advances in the field of health, safety, fire, environment, allied sciences and Engineering (HSFEA 2016) from November 18–19, 2016, University of Petroleum and Energy Studies (UPES), Dehradun. The conference was attended by leading academic scientists, leading engineers, policy makers, budding scholars and graduate students. The contribution from the authors cover topics ranging from technology that assist in ensuring healthy safe environment to methods and means that need to be adopted to ensure sustainable development—use of renewable and alternate sources of energy, reduction and control of sources of pollutions, etc. Topics on methods that can be used for monitoring and measurements of climate change and global warming are also presented. Additionally, the importance of ensuring safety and healthy work environment, free from occupational health hazards, is stressed upon.

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Advances in Health and Environment Safety

Select Proceedings of HSFEA 2016

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2018, XVIII, 396 p. 120 illus., 103 illus. in color.,

Hardcover

ISBN: 978-981-10-7121-8