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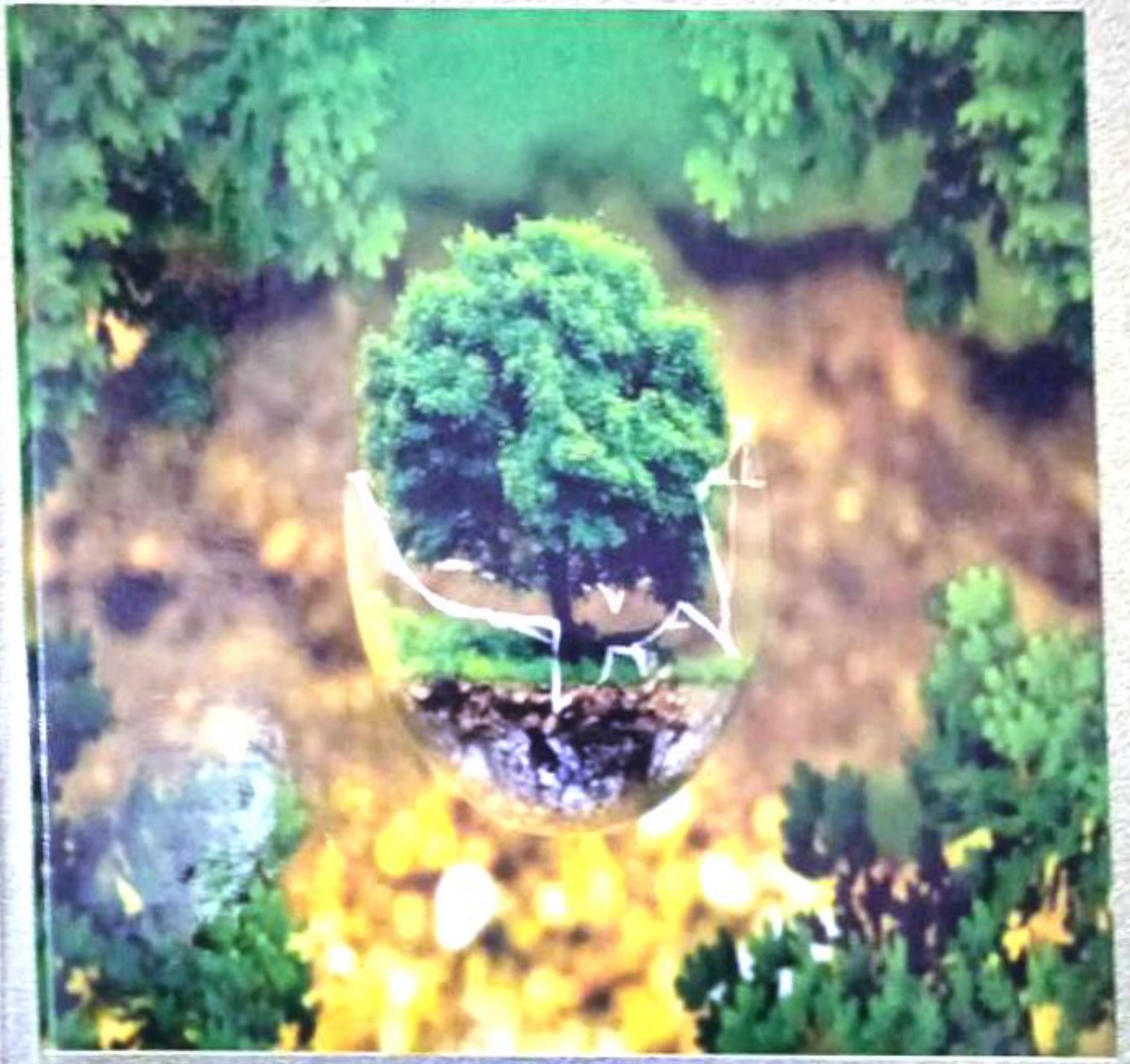

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GROUND WATER POLLUTION BY ARSENIC

Akbare Azam
Assistant Professor Department of Chemistry
Govt. Women P. G. College Ghazipur U. P.
Email :akbar_bhu@rediffmail.com

INTRODUCTION

The importance of water for sustenance of life cannot be overemphasized. Whether it is in use of running water in our homes, rearing cattle and growing crops in our farms, or the increased uses in industry, remain immeasurable. Water pollution is generally induced by humans. It results from actions of humans carried on to better self. These could be treated under the various activities that man engages in, that lead to pollution. The growth of human population, industrial and agricultural practices is the major causes of pollution. Water pollution becomes worse as a result of overcrowding in urban areas. Agricultural, domestic and industrial wastes are the major pollutants of agnatic habitats. Sewage is the biggest pollutant of fresh water when discharged into them. Sewage is the waterborne waster of society and the discharge of untreated sewage into a river is very enormous and unhealthy. When the polluted water seeps into the ground and enters an aquifer it results into ground water pollution. The most of our villages and many townships, ground water is the only source of drinking water. Therefore, pollution of groundwater is a matter of serious concern. Groundwater gets polluted in a number of ways. The dumping of raw sewage on soil, seepage pits and septic tanks cause pollution of groundwater. The porous layers of soil hold back solid particles while the liquid is allowed to pass through. The soluble pollutants are able to mix with the groundwater. In addition to these, the excessive use of nitrogenous fertilizers and

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Co- Existence of Environment & Development with Green Chemistry

Akbare Azam•

The definition of Green Chemistry starts with the concept of invention and design. This means we, scientists and technologists, must take into account from the start what we are looking for, what kind of product, how we are going to design its manufacture and its use. The impact of chemical products and chemical processes must be included as design criteria. Hazard considerations for initial materials and final products must also be included in the performance criteria. Another aspect of the definition of green chemistry is in the phrase "use and generation of hazardous substances".

We must think in advance if use of the product is going to be dangerous (workers, consumers) or if it is going to generate environmental pollution through their use or after their practical application (as waste). Rather than focusing only on those undesirable substances that might be inadvertently produced in a process, green chemistry also includes all substances that are part of the process. Also, green chemistry recognizes that there are significant consequences to the use of hazardous substances, ranging from regulatory, handling and transport, production of waste and liability issues. It is important to stress that green chemistry addresses both chemical products and the processes by which they are manufactured. The emphasis is clearly on design of greener products and processes. Green chemistry embodies two components:

(1) Efficient utilization of raw materials and the elimination of waste, and

(2) Health, safety and environmental aspects of chemicals and their manufacturing processes.

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5. Mohan Y, Raju KM, Sambaiwalu K, Singh S and Sreedhar B (2007). J. Appl.
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6. Song JY, Jang HK and Kim BS (2009). Process Biochem.44:1133-1138.
7. Umamaheswari M and Chatterjee TKi (2008). Ind.J. microbiol. 5, 340-345.
8. Vedaprina, A. (2010). J. Nano materials and Biostructures. 5: 1. 9-21.

OP-02 ROLE OF GREEN CHEMISTRY IN SOLVING ENVIRONMENT

Akhtar Azam*

*Department of Chemistry, Govt. Women P. G. College Ghazipur U. P. Email: akhtar_*

Abstract: Green chemistry, also known as sustainable chemistry, is an umbrella concep
grown substantially since it fully emerged a decade ago. By definition, green chemis
design, development, and implementation of chemical products and processes to re
eliminate the use and generation of substances hazardous to human health an
environment. Green chemistry is an approach to chemistry that uses the 12 Principles o
Chemistry. It reduces or eliminates the need for and generation of hazardous materials
the manufacture, design, and application of chemistry. Science achieved medicinal ma
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among them being the contamination of land, water and environment. This is caused
because of the impacts of results of compound businesses, which are being released into
streams/seas and the land. The utilization of harmful reactants and reagents also
exacerbate things. The contamination achieved such levels that various governments ne
to limit it. This denoted the start of Green Chemistry by the center of 29th century.

Keyword: Sustainable chemistry, Green chemistry, Hazardous materials, Compound bus

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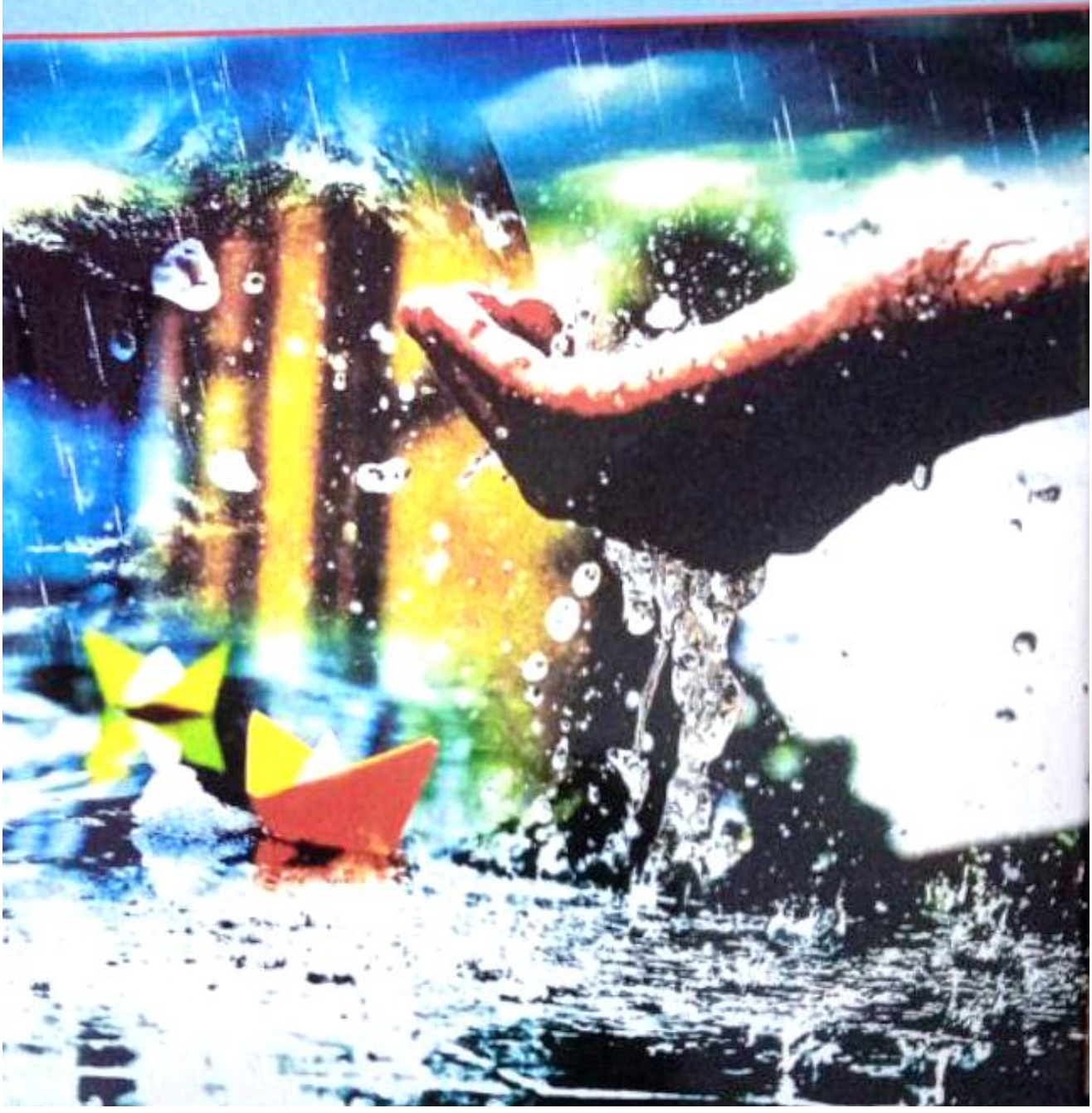

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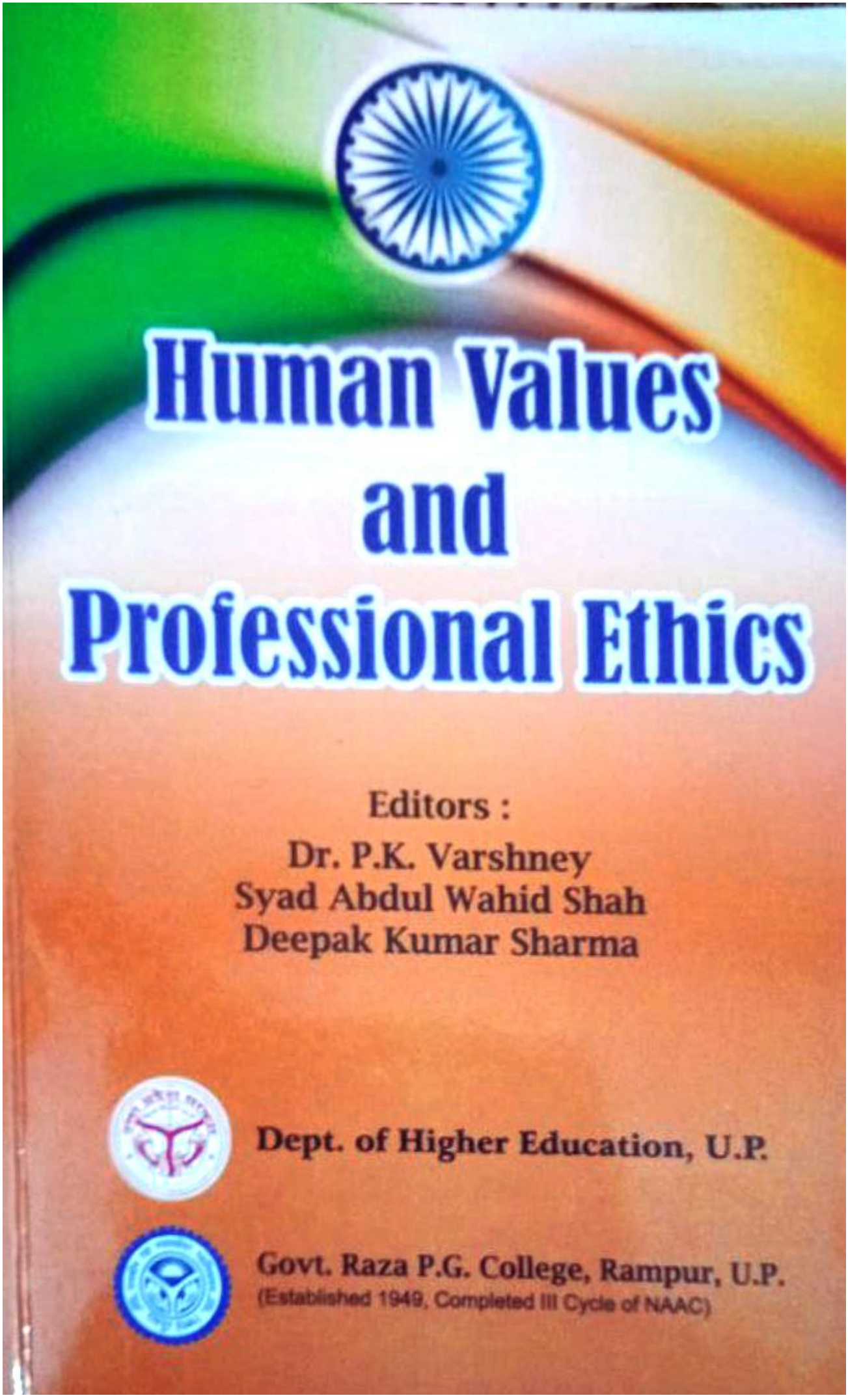
A Study Of Groundwater With Special ReferencetoArsenic Contamination & Its Consequences

Akbare Azam

Assistant Professor Department of Chemistry Govt. Women P. G. College Ghazipur U. P.

Abstract

For the past few decades, arsenic (As) contamination of groundwater and soil has become an important environmental problem globally. Many As compounds exist in the environment and biological systems as well. Naturally occurring As contamination of groundwater has been reported in groundwater more than 105 countries of all continents except Greenland and Antarctica. Arsenic mostly exists in two types of oxidation states which are arsenate (As^{5+}) and arsenite (As^{3+}). These two oxidation states are interconvert able by oxidation of As^{3+} into As^{5+} and reduction of As^{5+} into As^{3+} Arsenic also exists in another form i.e. organic form and it is formed by biomethylation of arsenic. An arsenic contaminated area namely, Ballia district of UP was chosen for this study. A set of 36 samples were collected from hand pumps and tubewells (30–33 m depth) thrice in a year namely pre-monsoon, monsoon and winter seasons. Nine samples were also collected from deep bore well hand pumps (66–75 m) to study the difference in geochemistry with the shallow pumps.Various water quality parameters like As (III), As (V), sulphate, nitrate, phosphate, bicarbonate, ammonia, were determined. Arsenic concentrations ranged from 0 to 468 µg L-1 in ground water collected from depths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ENVIRONMENT CONSERVATION AND SUSTAINABLE DEVELOPMENT THROUGH INDIAN CULTURE

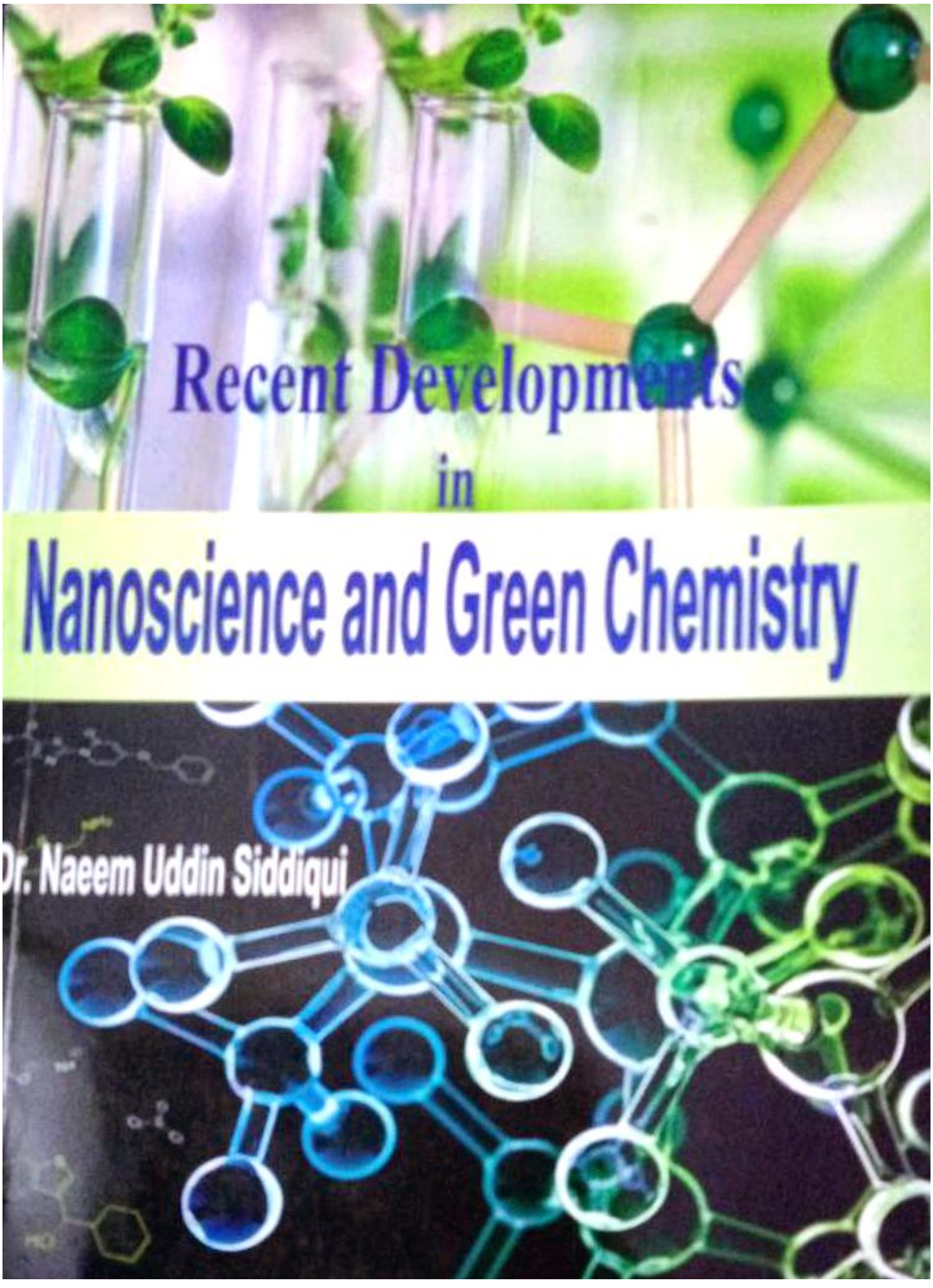
Akbare Azam
Assistant Professor, Department of Chemistry, Govt. Women P. G. College Ghazipur (U. P.)

INTRODUCTION

In the second decade of 21st. century, we all can feel very modern and advanced, as we have crossed all the obstacles and hindrances to achieve a lifestyle of utmost comfort and luxury. The protection and preservation of environment is a pressing issue. Every person, organisation and institution has an obligation and duty to protect it. Environmental consciousness deserves to be propagated at all levels. Environmental conservation can be achieved, if we all share a single thought, the thought of creating a better world to live in, the thought to give a better deal to everyone, human or otherwise, to the present as well as to the future generations, who have to share the Almighty's great gifts of clean environment and abundant natural resources on this planet earth. Environmental protection encompasses not only pollution but also sustainable development and conservation of natural resources and the eco-system. Environmental degradation can be either localized such as the depletion of a nation's forest resources, or global, such as destruction of the ozone layer. The focus of the discussion today revolves around examining the extent to which awareness about the environment has percolated into public consciousness, and making a frank appraisal of enforcement measures adopted so far in protecting the environment. It has been possible as we not only utilized but overexploited our natural resources, beyond the capacity at which they can be regenerated by nature with the help of advancements in technology in the last two centuries at a very high pace.

SUSTAINABLE LIFESTYLE and INDIAN CULTURE

The Indian conception of life is embodied in a coherent world-view in which all its aspects exist in a state of inter-related harmony, being governed by a universal order that is reflected in all realms of human experience. The human being is part of a well-ordered system in which all aspects of life and nature have their place, and are not in opposition, but in harmony with each other. This harmony between humans and nature is integral to the Indian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GREEN CHEMISTRY AND ITS SCOPE

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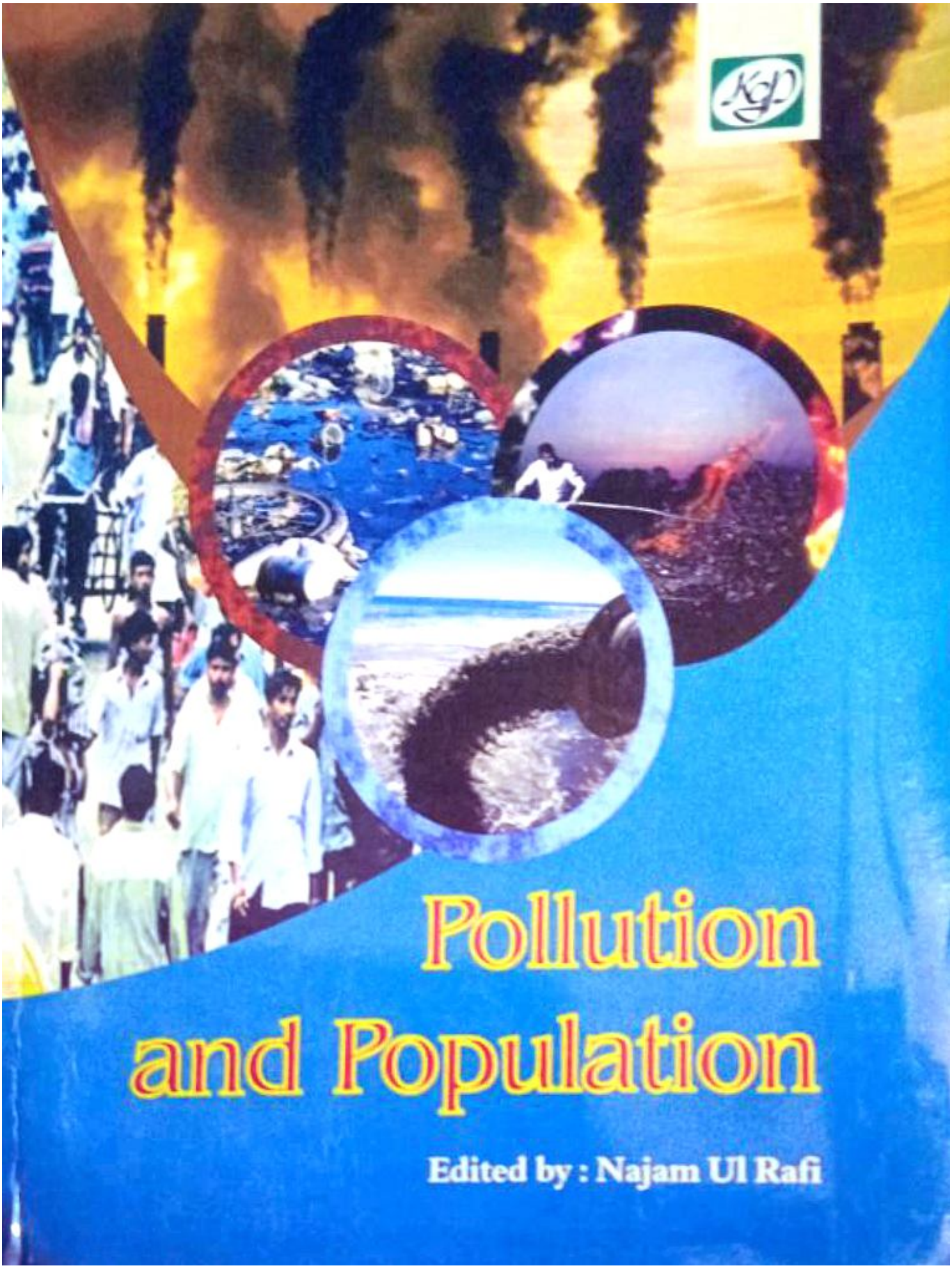
Abstract

Science achieved medicinal unrest till about the center of twentieth century wherein medications and anti-infection agents were found. The world's sustenance supply likewise expanded massively because of the disclosure of half and half assortments, improved techniques for cultivating, better seeds, and utilization of bug sprays, herbicides and manures. The personal satisfaction on earth turned out to be vastly improved because of the disclosure of colors, plastics, beauty care products and different materials. Before long, the evil impacts of science likewise wound up articulated, fundamental among them being the contamination of land, water and environment. This is caused basically because of the impacts of results of compound businesses, which are being released into the air, streams/seas and the land. The utilization of harmful reactants and reagents additionally exacerbate things. The contamination achieved such levels that various governments made laws to limit it. This denoted the start of Green Chemistry by the center of 29th century. Practical Chemistry is an idea which adds to accomplishing various objectives of the 2030 Agenda for Sustainable Development (SDGs). It is based, among others, on the standards of "green science" and has interfaces withsignificant points, for example, asset protection, squander the board, word related security, worker and purchaser wellbeing, and nourishment. Supportable science joins environmentally suitable arrangements with financial accomplishment under thought of societal and social requests.

Keywords: Sustainable chemistry, Hybrid varieties, Compound businesses

Introduction

The Green Chemistry upheaval gives a huge number of chance to find and apply new manufactured methodologies utilizing elective feedstock; Eco neighborly response conditions, vitality minimization and the plan of less poisonous and naturally more secure synthetic substances. The inception and premise of Green Chemistry for accomplishing natural and financial success is intrinsic in a practical world. One significant component of economical science is ordinarily characterized as the synthetic research going for the improvement of concoction procedures and items concerning vitality and material utilization, inborn security, lethality, natural degradability, etc. While considering advancement has been made in ecological science, Green Chemistry, and the natural evaluation of concoction items, be that as it may, the societal part of reasonable science stays to be completely perceived in all parts of synthetic research. One essential for this is the incorporation of feasible science into compound instruction from the earliest starting point. Green Chemistry is the use of set of rules that decreases or disposes of the utilization or age of risky substances in configuration, assembling and use of synthetic items. Practically speaking, Green Chemistry is taken to cover an a lot more extensive scope of issues than the definition covers. Just as utilizing and creating better synthetic compounds with less waste, Green Chemistry additionally includes decreasing other related ecological effects, incorporating decrease in the measure of vitality utilized in concoction forms. Subsequently, there have been endeavors to accomplish earth amiable blend and different acts have been passed to control and treat contamination, in an undertaking to urge enterprises and scholastics to devise novel innovations, forms and instructive materials, disheartening the arrangement or utilization of perilous substances. Green Chemistry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ENVIRONMENTAL ISSUES : A DISCUSSION IN INDIAN & GLOBAL SCENARIO

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Assistant Professor,
Deptt. of Chemistry, Govt. Women (P.G.) College, Ghazipur (U.P.)

INTRODUCTION

Presently our Global Environment has very much threatened by many Environmental problems. Many scientific theories have been explained evolution of earth and process of origin of life on earth. It also explain historical background of Environmental issues. Rapid growth of human population in India has created many Environmental problems. Because of uncontrolled growth of urbanization & Industrializations. Overpopulation has produced a large amount of food demand which has lead massive intensification and expansion of agriculture, destruction of forests. We are facing major Environmental issues like forest and agricultural land depletion, natural resources (water, minerals,soils,rocks etc.) depletion , imbalance in ecosystem and food chain, livelihood of poor people. Projected population records show that upto 2050 India will become first and china will be second in position of population in the world. Growing population of our country use its natural resources exhaustively which leads depletion of minerals in agriculture land, water shortage and various types of water, air pollutions. Environmental issues cannot be confined to a particular area because fall in production of cereals in one country also affects demand of cereals of other country. Developed and developing countries are facing problems equally. Developed countries like America, Britain, Japan although have lower population than developing countries like India, Bangladesh, Pakistan but their citizens used natural resources many times more than that developing countries citizens.

INDIAN ENVIRONMENTAL QUALITY

For improving quality of life leading to sustainable development, it is required to maintain our environment quality. In India many types of diseases are due to various health problems like malnutrition, contamination of food, water and air. So it is very much required to maintain a balance between economic, social and environmental issues. The environmental issues

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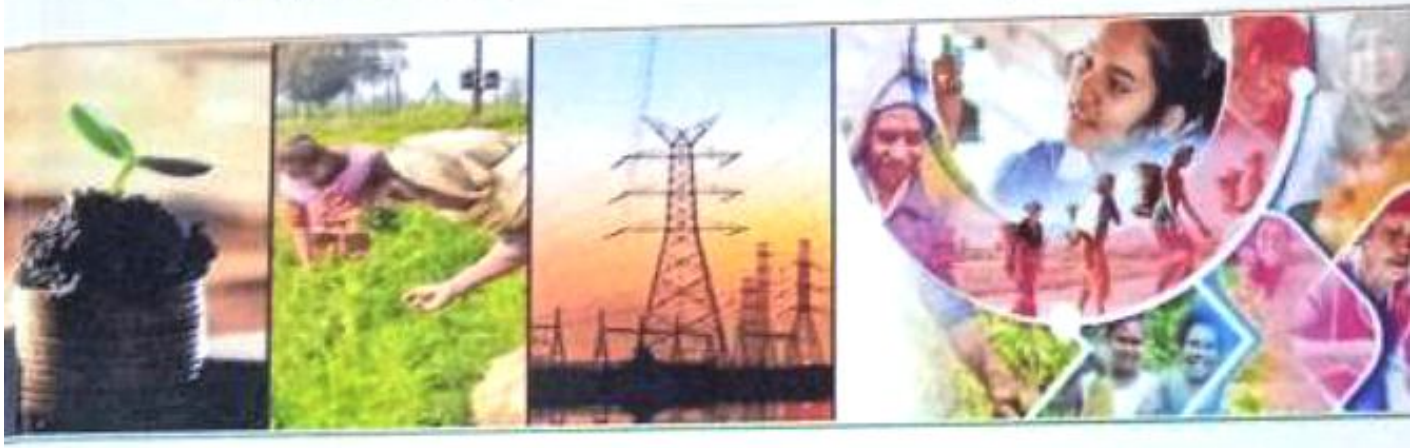

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Opportunities & Challenges of Environment Education in Transforming India

Dr. Akbare Azam* & Dr. Awanish Kr. Pandey**

**Head of Deptt. of Chemistry, Govt. Girls P. G College, Ghazipur, U. P.*

***Assistant Professor, S. M. M. T. D. College, Ballia, U. P.*

Introduction

The world in the 21st century is facing many challenges related to the environment. On the one hand,the world is developing at an alarming rate while on the other hand, the destruction of natural resources is going on. Therefore, the world's present development path is not sustainable. Efforts to meet the needs of a growing population in an interconnected but unequal and human-dominated world are ignoring the Earth's essential life-support systems (Kofi Annan, 2000). Today, human society is facing severe environmental problems like climate change, greenhouse effect, energy crisis, depletion of natural resources, biodiversity loss, pollution of air, water, soil, etc. The scope of the problems is from the local level to the global level. The ever-increasingpopulation and changing lifestyles are increasing the severity of the environmental problems. The time has come to protect the natural environment through precise efforts.

Environmental Education not only educates the world population about the natural environment and its problem but also aims at developing in them the knowledge, attitude, and skills necessary to protect the natural balance inthe environment besides working for its enrichment. Environmental Education is nothing but teaching a man how to interact fully with the surrounding world, to improve his inner world. Environmental education

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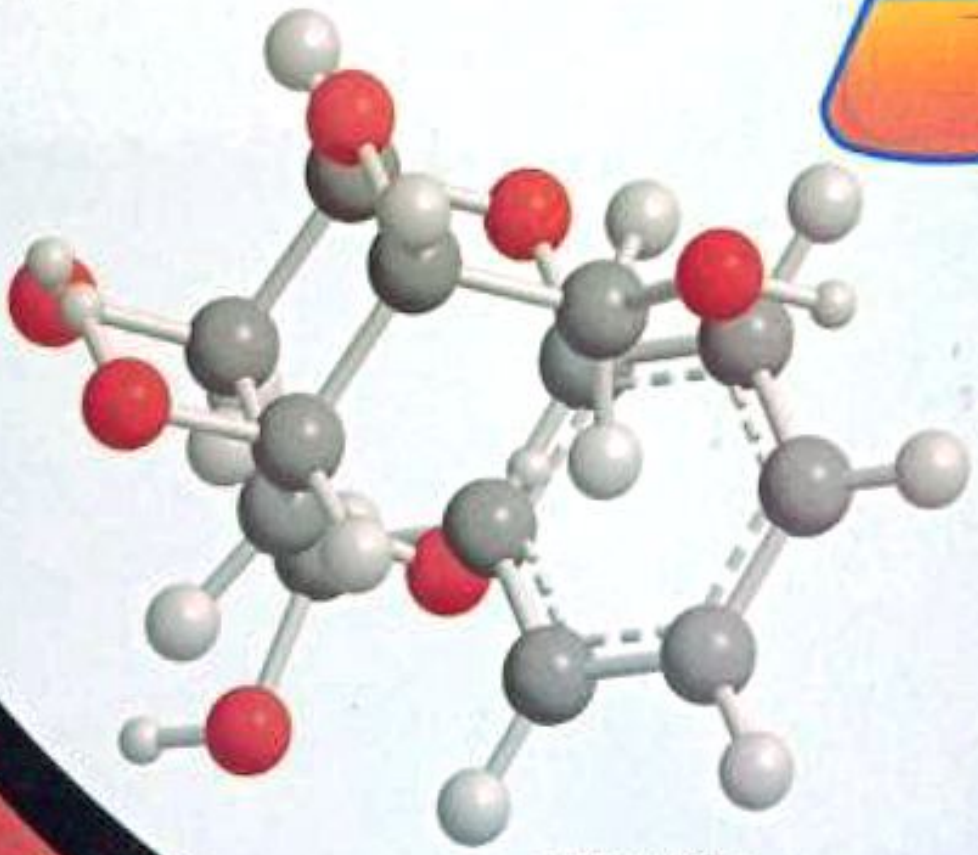

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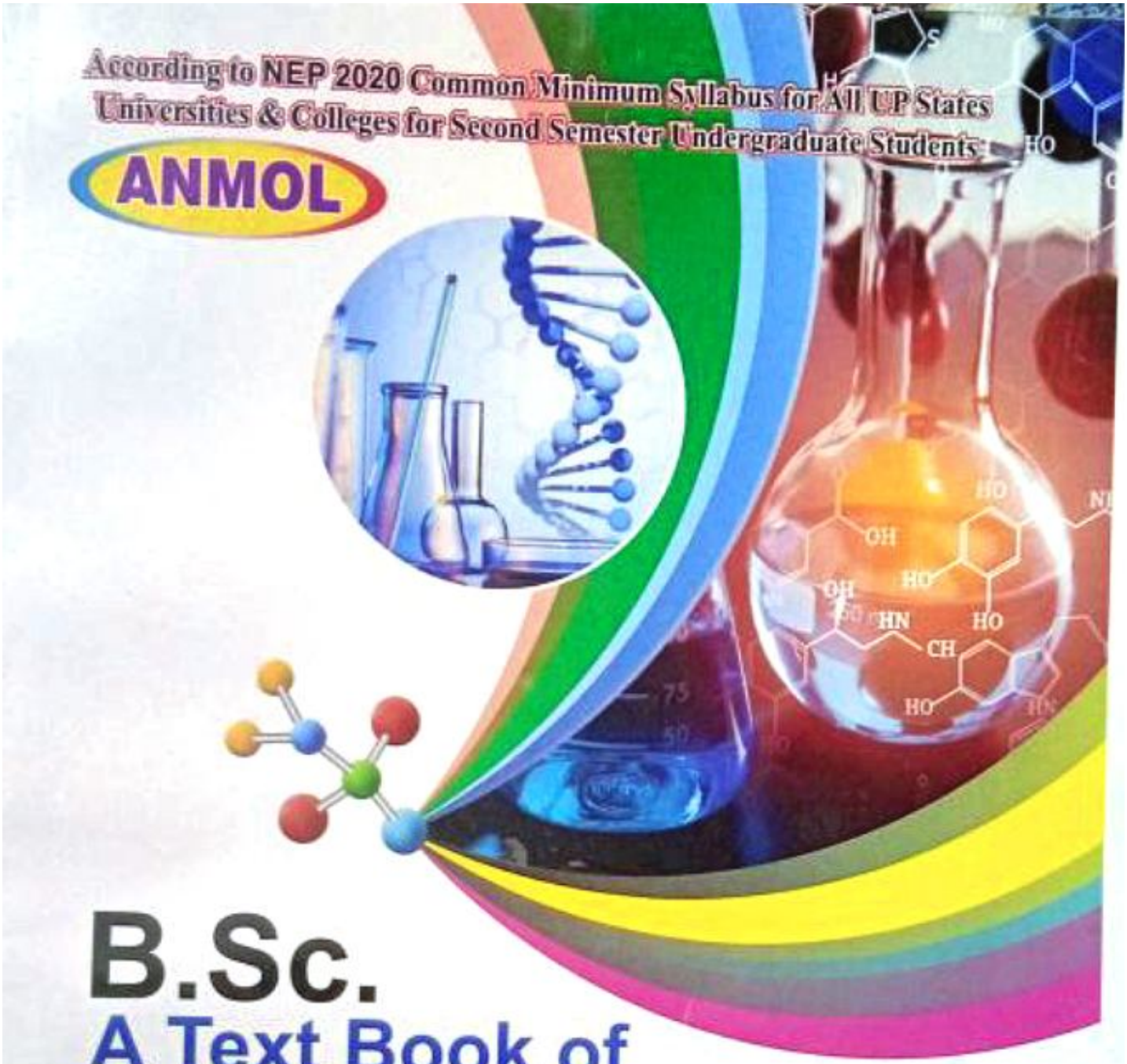

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