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## ENVIRONMENT AND SOCIETY



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### ROLE OF RENEWABLE ENERGY FOR SUSTAINABLE DEVELOPMENT

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#### INTRODUCTION

The relationship between energy and economic development is as crucial in the less developed countries as it was to be continued to be in industrialized nations. The process of economic growth is traceable in large part of the substitution of energy for muscle in the performance of every type of agriculture, industrial and domestic task. Energy is the golden thread that connects economics, increases social equality and an environment that allows the world to thrive. Development of any nation depends on energy and sustainable development only possible with sustainable energy. The concept of sustainable development was described by the World Commission on Environment and Development in its 1987 book *Our Common Future* [1]. Its definition of "sustainability", now used widely, is, "Sustainable development should meet the needs of the present without compromising the ability of future generations to meet their own needs" [2].

The conversion of energy develops environmental problems in term of greenhouse gas emission. The major greenhouse gases; carbon dioxide and carbon monoxide are causing global warming to the environment. Renewable energy resources appear to be the

one of the most efficient and effective solutions of environmental problem. That is why there is an intimate connection between renewable energy and sustainable development.

Energy is one of the single most important engines of growth and prosperity. This applies to the industrialized world, but even more so to the developing countries. The production and use of energy will increase dramatically over the next decades. This represents a crucial challenge for our society in terms of the long-term sustainability of our energy system. If we do not significantly alter the way we produce and consume energy today, the adverse impacts on our climate and environment will become both unmanageable and irreversible [3].

At present consumption of fossil fuel is dramatically increasing along with improvements in quality of life, industrialization of developing nations and increase of the world population. It has long been recognised that this excessive fossil fuel consumption not only leads to an increase in the rate of diminishing fossil fuel reserves, but it also has a significant adverse impact on the environment, resulting in increased health risk and threat of global climate change [4]. Increasing consumption of fossil fuels to meet

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# Chapter - 4

## Anophelines-The Vectors of Malaria

Dr. Smriti Johari

### Introduction

Mosquitoes are ubiquitous in distribution and are found in all regions of world, except the regions near the two poles and altitudes beyond 2000 marks. There are 3500 species of mosquitoes, out of which most of them exist in tropical climate. In India mosquitoes have been known from very ancient times and are considered as a cause of both nuisance and deadly human diseases. Mosquito borne disease are transmitted typically by the bite of an infected mosquito. Different vectors carry different diseases such as malaria, dengue, encephalitis, yellow fever, etc. which frequently occur in India and cause heavy morbidity and mortality annually. The dynamics of disease transmission by these vectors is governed by an array of factors such as climate change, environmental disturbances, and several other man made factors which include change in land use, population density, community hygiene and human behaviour. The civil developmental activities in the urban areas prove favourable for mosquito breeding as a result of which Malaria is freely disseminated from urban areas to rural areas by the free movement of the people to the big cities and towns in search of employment for various developmental activities like industries, constructions etc. While moving out of urban areas the infection borne individuals carry the infection even to the distant rural areas thus establishing a new source of transmission to the distant areas. Rural migration leads to the establishment of "urban slums" with poor housing and sanitary conditions. These areas have a heavy breeding potential of *Anopheles stephensi*, *A. culifacies*, *Culex quinquefasciatus* and *Aedes aegypti*. The major mosquito vectors of India belong to the genera *Culex*, *Aedes*, and *Anopheles*. While *Culex* is the major vector of filariasis and Japanese encephalitis, *Aedes* carries dengue, and *Anopheles* transmits malaria (Hemingway *et al.*, 2006).

In India over 80% of country population is exposed to the risk of malaria due to the wide distribution of mosquitoes. Malaria is one of the important factors responsible for the slow growth of nation's agricultural, industrial and economic progress.

## About Editor's



Dr. Deepali Lal is a working Associate Professor (30 years of vast and varied Experience), and the HOD Zoology Dept. S.D Govt. College, Beawar. She has done B.Sc, M.Sc, and Ph.D. from Rajasthan University, Jaipur. She has published more than 60 research papers in National and International Journals, and she is the author of 2 books. She has attended Newyork, Abudhabi, London, Nepal International conference as a keynote speaker and chairperson. She is a fellow of the American Leadership board.



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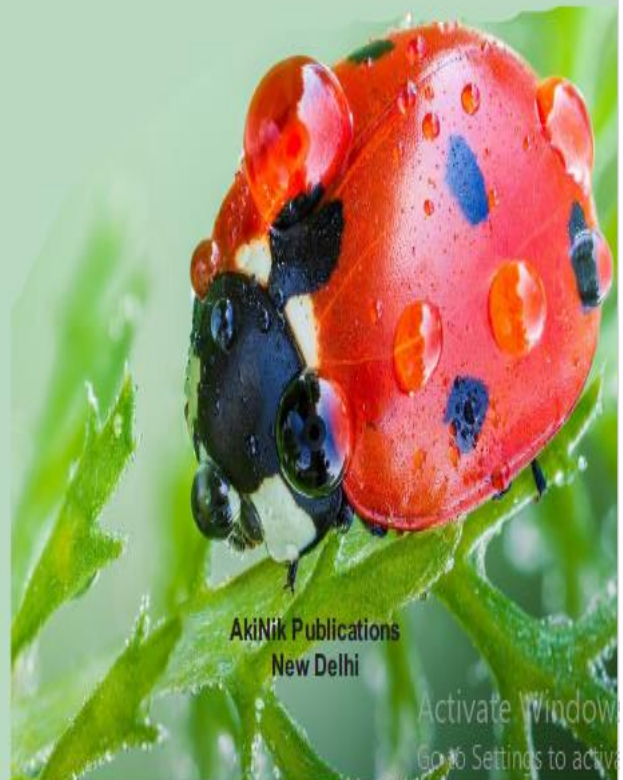


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