

Biotic Effects of Climate Change

W. Selvamurthy, Bhuvnesh Kumar and Rajeev Varshney

Defence Research and Development Organization

DRDO Bhawan, Rajaji Marg,

New Delhi-110 105

Abstract

Climate change and its consequences are being increasingly viewed as the foremost problem of the 21st century. The challenges of climate change at global, regional and national level are interconnected and have obvious implications on biological systems in plant, animal and the human being. These are closely linked with national security as well. Climate change, which was a conjecture a decade ago is now a reality as seen from severe heat waves, disappearing and shrinking glaciers, rising sea level and increased frequency and intensity of extreme weather events. Such happenings will drastically affect biosphere, impacting a large populace and harm badly our agriculture and animal husbandry. Tropical diseases, especially the vector borne, which will increase their range as the climate warms, can have devastating impact on human lives. Changing pattern of rainfall will lead to local shortage of food and safe drinking water. Large-scale human migration in response to rising sea level and other climate-induced stresses will impoverish many people with insecurity. It is the need of the hour to educate ourselves about implications of climate change, formulate the national strategy to conserve the eco-environment and also to mitigate the impact of climate change on biological systems.

Key words: climate change, global warming, disease outbreaks, water scarcity, agricultural ecosystem.