

Climate Change Research in Sri Lanka

K. W. G. Rekha Nianthi¹

Climate is a dynamic component of the environment, which has a direct and an indirect influence on man and his activities. Most commonly, climate is known as the long-term average weather condition prevailing over an area. Climate is dynamic in many respects; for example, it varies in time and space, and changes occur over sufficiently long period of time. This paper summarises past and present research of the climatic changes of Sri Lanka. A few climate related scientists have started descriptive level studies since late 18th century. A number of studies have been carried out on the climate change in Sri Lanka since later part of the last century. Statistical analyses have been started in the 1950s. After this period the scope and the depth of climate change studies have increased.

Climate change in Sri Lanka is mainly characterised by the temporal and spatial variations of temperature as well as rainfall conditions. In general, all the climate change studies reveal that the annual average surface air temperature has been rising in all parts of Sri Lanka. The positive temperature trends are noticeable during the Northeast Monsoon and the First Inter-Monsoon period. On the contrary, rainfall has been decreasing in most of the stations during recent period. Precipitation in the Southwest Monsoon decreased in the Central Highlands of Sri Lanka since the last century. Some of the studies have found that the negative anomalies of rainfall are evident on the western slopes of the Central Highlands in Sri Lanka. All annual temperature series in Sri Lanka is correlated with the global temperature anomalies and the agreement during the last decades is very striking. As far as the rainfall is concerned the observations of a decreasing trend in Sri Lanka corresponds to the global trends. Future predictions on climate change will be briefly focused in this paper.

Key Words: Climate; Change; Environment; Temperature

¹ Department of Geography, University of Peradeniya, Sri Lanka, E-mail: bnishanthi@yahoo.com