ESTIMATION OF GLOBAL WARMING DAMAGE COST DUE TO THE FOREST FIRES IN THE IMBULPE DIVISIONAL SECRETARIAT DIVISION, 2003 IN SRI LANKA

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The objective of the study was to estimate the global warming damage costs caused by man made catastrophic forest fires in the Imbulpe divisional secretariat division (23140 ha), Balangoda electorate in the Ratnapura district in Sri Lanka in 2003. The climatic forest fires occur every year during the period June to mid October in this area, creating numerous environmental and socio-economic problems such as declining of water table, extinction of endemic flora and fauna species, loss of bio diversity and pollution of air, water, and land and occasionally rendering people homeless. Even though the gravity of those forest fires in this region every year was devastating, the majority of the researchers did not take this aspect into their consideration.

Hence to combat this menace the Sabaragamuwa University Centre for Environment and Sustainable Development (SUCEDS) had launched a number of projects since 2000 and the current study is one such project. To accomplish this task primary data (forest fire affected land areas and types of forests) were collected by means of household surveys and land surveying techniques. In addition to that maps and previous reports pertaining to the area were used to obtain secondary data (land use types, population of that area, endemic plant species). Determination of the extent of burnt land of diverse types and the consideration of catastrophic forest fires caused in the Imbulpe area were identified using 1:50000 map. The estimation of the global warming damage cost of the burnt area was carried out by carbon Sequestration value of the burnt forest in the Imbulpe area by the Turner's (1994) value of $20. This value has been suggested as the financial damage caused by every ton of carbon released from burning tropical rain forests, which contributes the global warming. The estimated global warming damage costs based on lost carbon sequestration function was Rs. 126.5 million.

Further this research disclosed that the main reasons for such fires were fires set out for unknown reasons, fires to prepare fresh grazing land for cattle feeding, hunters also set fire to forests for poaching of wild animals, fires caused by butt-ends of cigarettes and fires set to clear virgin forests for agricultural purposes.