

# LAND USE IN INDO-GANGETIC PLAINS VIS-À-VIS ATMOSPHERIC CARBON DIOXIDE EMISSIONS

VINAY K. DADHWAL\* AND YASH P. ABROL\*\*

Indo-Gangetic Plains region (IGPR) cuts across Pakistan, India, Nepal and Bangladesh and includes the adjacent fluvial plains, largest in the World of the Indus and Ganges river systems. Recent land use/land cover (LULC) changes, covering both land conversion and land use intensification have been shaped by a number of technological, policy, socio-economic and biophysical factors. Carbon pools and fluxes in this region have been shaped by past human activities and it is a low phytomass and soil C pool region but has seen significant increase in crop NPP that is primarily attributed to enhancement in use of fertilizer and irrigation. It has however, significant energy use related C emissions. There is, however, large gap in our understanding of human impact on spatial and temporal pattern of net C release, specially the role of soils, biomass use patterns and vegetation productivity. Necessary data sets and models need to be built for C cycle linkage in evaluating future strategies for enhancing agricultural productivity with a long time perspective of sustainable natural resource utilization