



Land cover-climate interaction research in Monsoon Asia Integrated Regional Study (MAIRS)

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About 58% world population lives under the influence of the Asia Monsoon climate. The strong economic growth and high population density in the Asia monsoon region lead to unprecedented regional scale land use/land cover changes and increasing emissions over the last decades. These intense changes in land cover/use and in society have many direct and indirect effects on a variety of ecosystems, atmospheric composition, climate, and human health at a range of scales from local, regional to global scale. Land-use changes not only alter the physical characteristics of land surface which results in changes of air-land water and energy fluxes, but also the fluxes of CO₂ and other gases, all of which are expected to have significant impact on the variability and intensity of the Asia Monsoon.

One of the main targets of Monsoon Asian Integrated Regional Study is to understand the spatial and temporal characteristics of land use/land cover change in the past few decades in the monsoon Asia, and their impacts on the atmospheric circulation, hydrological cycle and carbon cycle regionally and globally.