

## The Asian Greenbelt –a possible tipping element for Future Earth

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The monsoon Asia has a unique and rich biosphere with great diversity continuously from the tropics to boreal region, forming so-called “the Asian Greenbelt” . The AG is rich in biodiversity: This AG region has had guaranteed many examples of long-term social and ecological sustainability where many traditional systems of agriculture and livelihood have supported large numbers of people through time. Asia is characterized by a complex mosaic of social and ecological diversity developed through a long history of human interaction with nature. The Asian monsoon climate system underpins the ecosystem services on which the livelihoods and wellbeing of billions of people depend. However, ecosystems in the AG are undergoing rapid and sometimes irreversible changes as a result of human activities. As a consequence, their biodiversity resources are under threat and their ability to provide livelihoods to hundreds of millions of people in the future are at risk. In addition, the recent climate model studies have also suggested that the Asian Greenbelt (AG) plays an active role in the monsoon climate, by controlling the energy, water and material cycle through vegetated land surface cover. In other words, the AG and the Asian monsoon climate has been manifested as an interactive system. destructive change of the AG is very likely to cause drastic change of the monsoon climate, which, in turn, will affect biodiversity and human activity of this region. I emphasize here that this AG issue as an important and crucial tipping point element not only for future Asia, but for the Future Earth itself.

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