

Climate change mitigation potential in the forestry sector of Malaysia

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Abstract

The atmospheric concentration of greenhouse gases (GHGs) has been increasing with its negative effects on global climatic system. Forests keep a crucial role in regulating climate change by controlling the quantity of atmospheric carbon dioxide which is one of the major GHGs. Forests absorb a huge amount of carbon dioxide from the atmosphere through photosynthesis and store the carbon in tree biomass which is called carbon sequestration. Because of such capacity of forests, carbon sequestration has received much attention nowadays due to the concerns of global climate change. Forestry sector has a huge potential in reducing carbon emissions, atmospheric accumulation of GHGs as well as the negative impacts of climate change. With regard to this, Malaysia as one of the tropical countries with forest land of around 67% of total land area, could help to reduce the negative impacts of climate change by enhancing national carbon sink. Therefore, this article attempts to figure out the climate change mitigation potential in the forestry sector of Malaysia. The results show that Malaysia has a total of 2934 million metric tonne forest biomass carbon in 2017 with average of 158.65 tonne biomass carbon per hectare of forest area. The study found the forest biomass carbon sequestration increment rate is 0.012144 tonne carbon per year in 2017, which indicates a huge growing potential for future climate change mitigation through the forestry sector of Malaysia. Discussions are made on the importance of this study for economic valuation of forest carbon sink in Malaysia.