

DEEP DECARBONIZING AFOLU SECTOR TOWARD 2 DEGREE

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Abstract

The Paris Agreement clearly stated the need for global communities to work together to hold the increase of global temperature below 2°C (pursuing 1.5°C). The peak of GHG emission should happen as soon as possible and achieve a balance between anthropogenic emissions and removals in the second half of this century. For Indonesia, the development of agriculture and forestry sectors has contributed significantly to the GHG emission. The increase in land demand following the increase in demand for food, pastoral, wood, and settlements and other infrastructure development would be a challenge to deep decarbonizing this sector. With strong commitment and good mitigation policies and measures, deep decarbonizing this sector is possible without scarifying much development target of this sector. Mitigation policies and measures include (i) improving the management of land and forest resources through development of Forest Management Unit in all forest areas, (ii) pushing adoption of sustainable management practices in production forests by implementing mandatory certification systems, (iii) reducing dependency on natural forests in meeting wood demands by increasing establishment of timber plantation on community lands and state lands and increasing the use of wood from agriculture plantations, (iv) reducing pressure on natural forest for establishment of development areas and agriculture expansion by the improvement of varieties, land productivity and cropping intensity, (v) enhancing sink through increasing the implementation of restoration of production forests ecosystem and land rehabilitation, (vi) limiting use of peat land for timber and agriculture plantation through the issuance of moratorium policies and peat land restoration, and (vii) increasing the adoption of low emission farming practices. The result of analysis suggests that by 2050 Indonesia would be able to deep decarbonizing this sector up to -0.05 ton CO₂e per capita. Rapid decrease in emission is result of increase land productivity and cropping intensity leading to less demand for land for crop production and enhanced mitigation actions. The reliance on natural forest for producing wood is also decreased as a result of increasing rate of timber plantation development in particular, and increasing rate of land rehabilitation. In addition, emission from peat decomposition also decrease significantly as a result of the peat land moratorium policy in which no more of peat land conversion for large plantation is allowed, and restoration of larger part of peat land.