

# **STUDY ON CARBON STOCK IN MANGROVE FOREST OF XUAN THUY NATIONAL PARK, NAM DINH**

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## **Summary**

Carbon stock in three carbon pools of the mangrove forests at Xuan Thuy National Park (aboveground biomass, belowground biomass and soil carbon pools) was quantified in 2018. The results showed that soil carbon pool (159.96 - 163.33 tons per hectare) was about 3.11 - 9.40 times larger than that of above ground biomass carbon pool (24.37 - 25.72 tons per hectare) and 1.01-1.20 times larger than that of below ground biomass carbon pool (28.37 - 30.81 tons per hectare). The average carbon accumulation rate of the mangrove ecosystem was  $14.32 \pm 4.54$  tons per hectare per year (corresponding to  $52.55 \pm 11.56$  tons CO<sub>2</sub> per hectare per year). The relative high carbon stock accumulated in the biomass, especially in the soil of mangrove ecosystem at Xuan Thuy National Park could be a hard scientific basis of mangrove rehabilitation, sustainable conservation and management for increasing carbon sequestration and reducing CO<sub>2</sub> emission in coastal areas of Vietnam.

**Keywords:** *Carbon, mangroves, biomass, Xuan Thuy National Park.*