SUMMARY

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Issues regarding global warming is lately one problem that is common considered by almost all countries in the world, including Indonesia. We are struggling to overcome with intensified that global warming, to try as well as prevent the development of global warming. One of the ways reducing global warming is to preserve the forest. Because forest has multiple benefits for life, either directly or indirectly. Benefit directly from a timber, non-timber forest products such as bamboo and rattan, and wildlife. Even the indirect benefits of forests for environmental services as watersheds, aesthetic function, a provider of oxygen, and carbon sequestration.

Forest, one of the carbon sinks in the world, the largest and plays an important role in the global carbon cycle, but also can generate forest carbon emissions (source). Forests can store more carbon than other vegetation types such as grasslands, crops, and tundra. Be able to absorb carbon vary by type, it is influenced by the number and density of trees, tree species, environmental factors are sun exposure, moisture content, temperature, and soil fertility that affect the rate of photosynthesis.

The research was holded on February to August 2012, the data was researched in some land cover in North Mamuju, West Sulawesi; data analysis by Influence of Forest Laboratories, Department of Silviculture, Faculty of Forestry, Bogor Agricultural University; and Laboratotium Soil, Soil Research Bogor. Measurement of biomass and carbon storage was calculated by using the data stands to diameter and height of each land cover. Analysis of soil physical properties by soil textures and soil chemistry (pH, the ratio C/N, and the content of P, K, Ca, and Mg) was indicated on samples of soil disturbed and undisturbed soil.

Based on researched data results that showed in land cover, the greatest carbon savings are oil palm plantat ions by amounting reach to 997.81 tons/ha. The lowest carbon deposits were found in land cover in the form of mixed farms to 43.89 tons/ha. The conclusion correlation test indicated that the physical and chemical properties of soil have affected the value of carbon storage in a land cover.

Keywords: global warming, forest, carbon storage, soil physical properties, chemical properties of soil.