



Carbon sequestration; Climate change; Urban forests

Urban forests can help to mitigate the effects of climate change by lowering atmospheric carbon dioxide [1]. Urban areas are home to more than half of the world's population. Urbanization is estimated to result in 6 billion urban dwellers by 2050. Cities will be exposed to climate change from greenhouse gas induced radiative forcing, and localized effects from urbanization such as the urban heat island. Carbon dioxide emissions and climate change are two of the most urgent challenges in today's society. Carbon dioxide (CO₂) is a common greenhouse gas and a major contributor to global warming. It accounts for 72% of total anthropogenic greenhouse gas emissions and accounts for 9-26% of the greenhouse effect [2].

Addis Ababa, the capital and the most populated city of Ethiopia a rapid and unplanned expansion and commercial development, along with population pressure is deteriorating the city environment with time. The high rate of urbanization, use of fuel wood and charcoal as biofuel, have all contributed to the degradation of green spaces in Addis Ababa. Encroachment, illegal cuttings and the planting of inappropriate species all have an impact on urban forests of Addis Ababa [3]. The city faced challenges from flooding, threats to human comfort and environmental injustice. Because of their significance in sequestering and storing carbon, urban forests are becoming significant in meeting climate mitigation goals. Urban forests are increasingly important due to their role in sequestering and storing carbon and thus helping to meet climate mitigation goals.

Urban forest in Addis Ababa covers over 5000 ha of land. Eucalyptus

Tsegaye, it was difficult to determine the carbon content of the soil in the parks, because most soils were brought in from outside to boost the park's soil fertility [10].

Soil stores 2 to 3 times more carbon than CO_2 in the atmosphere and 2.5 to 3.0 times more than carbon stored in plants in the terrestrial ecosystem. The average value of soil organic carbon in urban forests 121.02 t ha^{-1} is similar with the natural forest of 121.28 t ha^{-1} in Menagasha Forest, higher than Zequalla Monastery forests of 57.62 t ha^{-1}

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