

# 6<sup>th</sup> Global summit on Climate Change

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### The significance of soil in the increasing carbon sequestration of urban forests

**Introduction:** Regarding the climate change, the priority can be bestowed to the fact that soil hold pivotal position combat, such phenomenon through carbon sequestration, and the lack of plants on land may havoc the loss of carbon.

**Aim:** The aim of this study was to survey the effects of urban forests on soil carbon sequestration in three stands including Robinia-Fraxinus, Robinia, and Cupressus.

**Methods & Results:** The research was done at forest Pardisan Park in Tehran, and its result was compared to a control land (barren land). With measuring organic carbon in both 0-15 cm and 15-30 cm depth, the results demonstrate that carbon sequestration is significantly the highest value ( $p < 0.01$ ) in the soil of mixed Robinia-Fraxinus stand (18.96 ton per ha) by comparison to Robinia and Cupressus (14.86 and 9.69 ton per ha) and barren land (6/97 ton per ha), respectively. Moreover, organic carbon in the 0-15 cm depth of soil in forested stands is more than the 15-30 cm ones; while a reverse trend is observed in the arid land. Also, stepwise regression is shown that organic material and nitrogen are the most important components affecting carbon sequestration. As a consequence, the aforementioned stands are of a tremendous help towards an increase in the amount of carbon sequestrated into soil (11.99, 7.89, and 2.72 ton per ha) against that of control land.

### Biography

Rozita Zare has completed her MSc in Natural Resources major from Islamic Azad University, Science and Research Branch, Tehran. She is a Lecturer as well as scholar in both Environment Faculty of Applied Science and Technology University of Agriculture and Natural Resources Engineering Organization. She has published more than eight papers in reputed journals and also presented papers in national and international conferences.

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