ABSTRACT

Rapid Urbanization has many environmental impacts that associated with reduction of green space .This study focused on five types of plants near Mehmood Booti steel rolling mills, specifically Russian olive, Cascara, Ficus Religiosa, Sweetgum, and Teak. The goal was to understand how well these plants can tolerate air pollution and their ability to clean the air, a process known as phytoremediation. The study measured various factors like APTI values (a measure of air pollution resistance), heavy metal levels, calcium content, chlorophyll content, and proline content. The results showed that all five plant species were resistant to air pollution, as indicated by their moderate to high APTI values. Additionally, all of them could absorb heavy metals from the soil, although the rates varied among species. Russian olive and Sweetgum stood out as the most effective for phytoremediation, with Russian olive removing 34.17% of heavy metals and Sweetgum removing 0.17%. The main aim of the study was to identify plants that could be used to create green belts around steel rolling factories, with the potential to improve air quality. The findings highlight the importance of choosing plant species carefully based on their ability to tolerate pollution and effectively remove contaminants. Ultimately, the study suggests that using these plants in green belts could be a successful strategy(green space system) for reducing air pollution around steel mills, contributing to better air quality and sustainable urban development.

Keywords: air pollution, green belts, phytoremediation, plant species, urban development, steel rolling mills, pollution tolerance, removal efficiency, sustainable urban planning.