**Risk assessment of particulate matter generated during construction activities**

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In the urbanization processes during construction activities large amount of particulate matter is produced and released in surrounding environment. Increased suspended particulate matter (PM) emission in abiotic and biotic matrix is eco problem that follows every architectural and urban alteration. PM emission has hazard effect on the total environment – air, water, soil and biosphere. Architectural transformations and construction activities generate more than 5% suspended particulate matter pollution within the world pollution. PM emitted in the atmosphere with diameter 10 and 2.5 μm are the key polluting substances. Suspended particulates have large sorption surface on which are attached and sorbed toxic hazard molecules of emerging organic and inorganic substances. Suspended particulate matter is fast and easily transported on long distances far away from sources via atmospheric transport dominantly by vertical and horizontal diffusion mechanisms. Numerous epidemiological studies have shown that short and especially long term exposition to suspended PM from ambient air with sorbed toxic molecules directly inhaled can penetrate deep into the lungs and lungs alveoli causing acute and chronic serious health problems and respiratory diseases such as asthma, bronchitis, cancer… PM emission directly attacks primary exposed construction workers at the source and secondary all inhabitants in surrounding environment - zones of high particulate pollution. Applying risk assessment with the determined concentration of PM emission on the peak points of the pollution zones can provide quantitative data for human population exposure analysis and creation of strategy for mitigation processes and activities.

**Keywords**: Particulate matter (PM), risk assessment, health, architecture, mitigation

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