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BOOK OF ABSTRACTS



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EFFECTS OF PARTICULATE MATTER ON THE ECOSYSTEM OF KOPAČKI RIT

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Kopački rit Nature Park situated between two rivers, the Drava and the Danube, has been protected area since 1967. Particulate matter (PM₁₀ i PM_{2.5}) concentration have been measured and monitored in the Kopački rit area from 2012 until 2017. Particulate matter is divided into two major groups – less than 2.5 µm (PM_{2.5}) and less than 10 µm (PM₁₀). Particulates larger than 10 µm sediments readily under the Earth's gravitational force. Particulate matter has negative influence on human health especially in connection with respiratory problems. It is, therefore, necessary to measure their concentrations. Larger particles have influence on upper and smaller on lower respiratory tract. However, particulate matter may also be suspended in the water; major part of PMs originates from water. If so, they can influence acidity of water (by lowering pH), change nutrient balance, affect biodiversity and contribute to acid rain. Accordingly, it is not unusual to measure PM concentration in water samples. Data on airborne particulate matter does not show considerable diurnal variations. Measured concentrations are, most often, within legal limits. Occasionally, readings exceeded limits especially during winter and/or night. There is very good linear dependence between PM₁₀ and PM_{2.5} concentrations.

Keywords: particulate matter, water & air pollution, monitoring, health issues

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