

STUDIES ON AIR QUALITY MONITORING IN GALATI CITY AREA

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Abstract: *Human society developments lead to the creation of a negative anthropic and technological impact on the air quality. The dispersion of pollutants in the atmosphere is a particularly dangerous phenomenon, hard to estimate and with unpredictable effects. Air is the environmental factor which constitutes the fastest way to transport pollutants around the globe. Air has a significant impact on life on Earth, thus monitoring and controlling its quality is a very important factor.*

Keywords: *air, pollutants, life, monitoring.*

1. Introduction

The development of human society leads to a techno-genic and anthropogenic impact on air quality. The pollutants dispersion in the atmosphere is a very dangerous phenomenon, difficult to assess predict its effects. Air quality may deteriorate randomly at any time in any places in the world and no man can intervene, even if they would like this. Pollutant dispersion and deposition are strongly influenced by weather conditions such as wind speed/direction and atmospheric turbulence. A very important role is played by the source gases. When found in the lower layers of the atmosphere these are almost stable, but when they reach the upper layers of the atmosphere, they became very dangerous and affect the ecological balance of the planet [1]. The air is the environmental factor which represents the fastest medium that favours the transport of pollutants in the environment. Air pollution has many and significant side effects on human health and can cause damage to the flora and fauna. For these reasons, we must pay a particular attention to supervise and bring improvements to the quality of the air.

Air quality is determined by air emissions from stationary sources and mobile sources (traffic), as well as the transport of pollutants from long-distances. In compliance with the classification criteria imposed by the European Union on the territory of Romania, within the national system of evaluation and integrated

management of air quality, there have been established 11 locations for assessing and managing the air quality, namely: Bucharest, Craiova, Pitesti, Ploiesti, Constanta, Braila,

Galati, Iasi, Baia Mare, Cluj Napoca, Timisoara and Brasov and other 8 areas for managing the air quality in accordance with the provisions of OM No 745/2002 [3].

All the natural factors determine the terms and conditions of all living beings, plants, animals, humans. In the natural environment there can be distinguished the natural physical components such as: air, water, geological substrate, relief, soil. The issue of quality and environmental protection has been brought into the spotlight as people became more aware of the need for conserving, protecting and utilizing more efficient the environment [1].

Galati County is part of South Eastern Europe development region (this includes: Vrancea, Buzau, Braila, Constanta, Tulcea), Danube Euroregion). Galati is the 5th city in size from Romania (293 523 inhabitants on 1 July 2007, a density of about 13.2 place/ha) and the Danube s largest harbour. Galati is located at 130km from the Black Sea and 250 km from Bucharest. Galati, with an area of 24,642 ha, is located in south-eastern of Covurlui Plain, on the left side of the Danube, with three terraces, from 4 to 70 m altitude, 7 km downstream of the confluence with the Danube and Siret and 150 km upstream of the Black Sea.