



BOOK OF ABSTRACTS

6TH INTERNATIONAL MULTIDISCIPLINARY
CONFERENCE FOR YOUNG RESEARCHERS

*"Science and Innovation: Advancing
the Path to a Sustainable Future"*

9-10 October 2025
Prague, Czech Republic

ISBN: 978-80-213-3513-4

Publisher: Czech University of Life Sciences Prague



Fog Dynamics in the Sumy Region (Ukraine) in the Context of Changing Weather Patterns

Diana Topchii ¹, Anatolii Kornus ^{1*}

¹ Department of General and Regional Geography, Faculty of Natural Sciences and Geography, Sumy State Pedagogical University named after A.S. Makarenko, Romenska str. 87, Sumy, 40002, topcijdiana8@gmail.com; kornus@sspu.edu.ua

* Correspondence: kornus@sspu.edu.ua

Abstract: Fog is a significant meteorological phenomenon that affects visibility, transportation safety, air quality, and overall atmospheric processes. This study focuses on the Sumy region in northeastern Ukraine. The purpose of the research is to analyze the temporal dynamics and meteorological drivers of fog formation based on long-term observations at two meteorological stations. The analysis is based on two stations: Sumy and Khutir-Mykhailivskyi. Fog in the region predominantly occurs from October to March, with peaks in November and December. Summer fogs are rare and irregular. Most fog events are recorded in the morning (6:00 and 9:00 a.m.). Average fog duration on foggy days is 6–7 hours, with an annual total of 500–600 hours. The most frequent temperatures during fog range from 1–2°C. The results confirm that fog formation in the Sumy region is closely linked to cold-season weather conditions and specific microclimatic parameters. While the general seasonal pattern remains stable, interannual variability suggests a sensitivity to broader atmospheric changes. Continued monitoring of fog characteristics is essential for understanding local-scale manifestations of climate variability.

Keywords: fog occurrence; Sumy region; seasonal variability; meteorological conditions; fog duration