Greenpeace Research Laboratories Technical Report

Corrigendum to: Trace gas observations Croatia 2026

September 2026

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Corrigendum
On 16th September 2026 it was identified that the wind direction data calculated by software provided with the measurement instrument was incorrect. Calculated wind directions were found to be inconsistent with the raw measured Northerly and Easterly wind components. The wind direction data have been revised by manually calculating wind directions from the raw Northerly and Easterly measurements. Revision of the wind data does not impact the conclusions of the report. Rather, the corrections strengthen the interpretation that the industrial facilities are sources contributing to the measured pollutant concentrations.

Changes were required in the Methodology, Results section and to graphs in Appendix 1.

The original report, revised report and corrigendum are available at:
https://www.greenpeace.to/greenpeace/?p=5123

The following changes were made to the report Methodology section:

- **Initial setup and acclimatization**

Original text: All measurements began at an up-wind background location where the instrument was prepared for use away from the hydrocarbon facilities being investigated.

Revised text: All measurements began at a background location where the instrument was prepared for use away from the hydrocarbon facilities being investigated and in an upwind location where possible.

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- **Sampling Design**

Original text: Upon arriving at each up-wind background location the acclimatisation procedure was completed.

Revised text: Upon arriving at each background location the acclimatisation procedure was completed.

The following changes were made to the report Results section:

- **Gas Facility Molve East:** The revised wind directions are now consistent with the Gas Facility contributing to pollution at the measurement sites.

Original text: Wind data at this site suggested very low wind speed, and directions consistent with the Gas Facility contributing to pollution at the measurement sites. with no single dominant wind direction. It was not possible to use wind direction data to investigate the sources of observed pollution.

Revised text: Wind data at this site suggested very low wind speed, and directions consistent with the Gas Facility contributing to pollution at the industrial sites.

- **Gathering Station IVA-1, Ivanić-Grad:** The revised wind directions suggest winds were less frequent from the north and west, not the south and east.

Original text: At Ivanić Grad's Gathering Station IVA-1 wind speeds were very low and there was no single dominant wind direction although winds were less frequent from the south and east.

Revised text: At Ivanić Grad's Gathering Station IVA-1 wind speeds were very low and there was no single dominant wind direction although winds were less frequent from the north and west.

- **Underground Gas Storage (UGS) facility Okoli south:** The revised wind directions suggest that pollution from the facility may have affected sites 1 and 2, and were not more likely to affect Site 2 than Site 1.

Original text: At the Underground Gas Storage facility in the south of Okoli, wind data suggests that any emissions from the industrial facility were more likely to affect Site 2 than Site 1.

Revised text: At the Underground Gas Storage facility in the south of Okoli, wind data suggests that any emissions from the industrial facility may have affected sites 1 and 2.

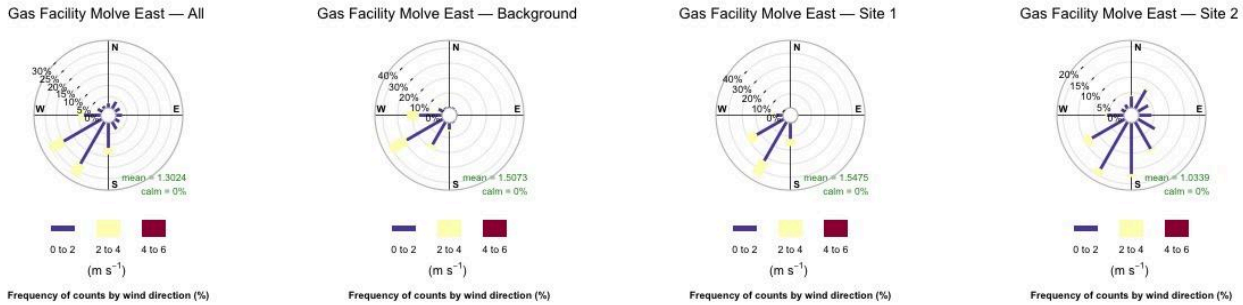
- **Underground Gas Storage (UGS) facility Okoli north:** The revised wind directions no longer suggest that the Background location may have been influenced by air from the direction of the industrial facility

Original text: At the Underground Gas Storage facility in the north of Okoli, wind data suggests that both Site 1 and Site 2 may have been influenced by any air emissions occurring at the industrial facility. Wind directions also indicate that the Background

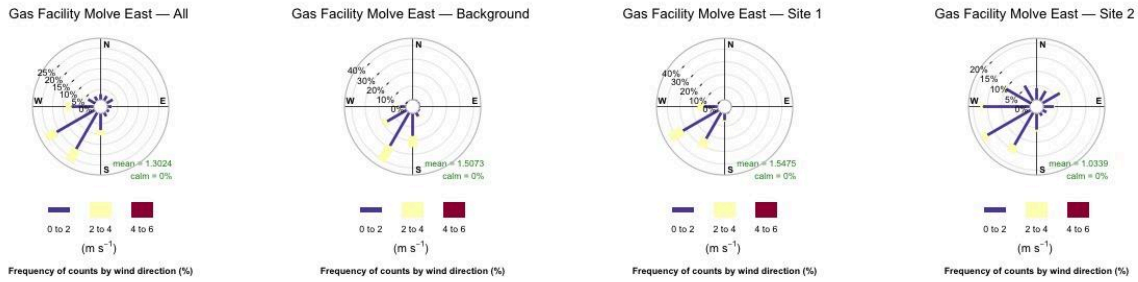
location may have been influenced by air from the direction of the industrial facility, but at a much greater distance.

Revised text: At the Underground Gas Storage facility in the north of Okoli, wind data suggests that both Site 1 and Site 2 may have been influenced by any air emissions occurring at the industrial facility.

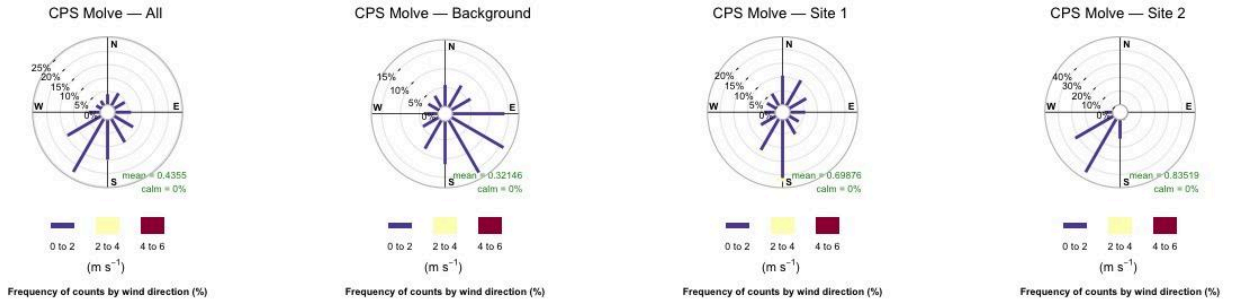
The following figures were revised in Appendix 1:



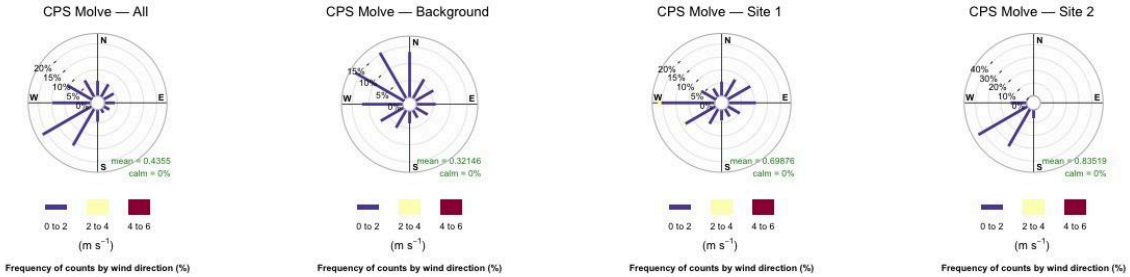
Original Figure A2. Wind observations during monitoring at background and industrial sites at Gas Facility Molve East.



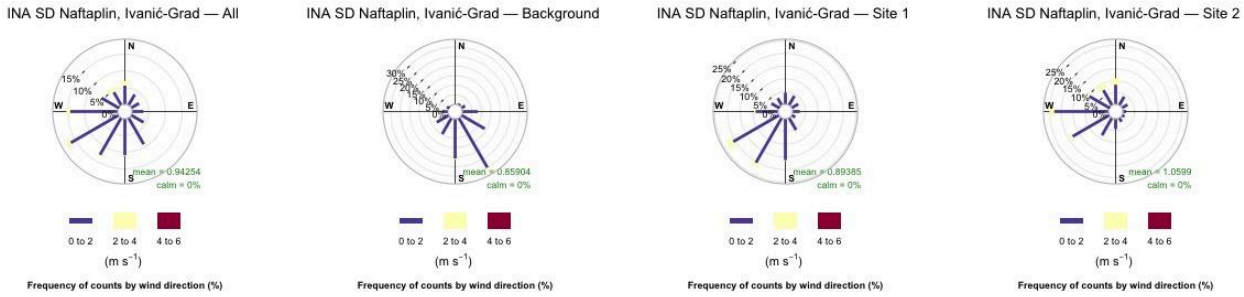
Revised Figure A2. Wind observations during monitoring at background and industrial sites at Gas Facility Molve East.



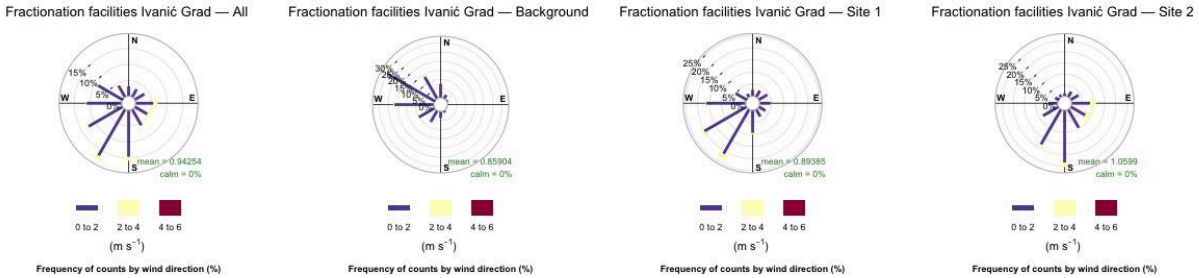
Original Figure A4. Wind observations during monitoring at background and industrial sites at CPS Molve.



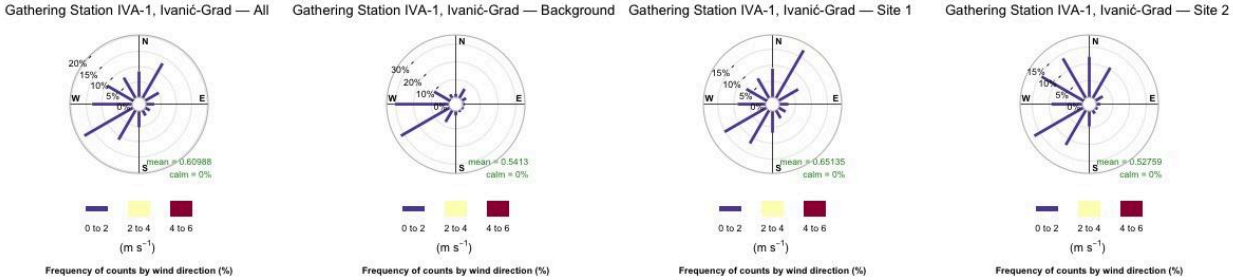
Revised Figure A4. Wind observations during monitoring at background and industrial sites at CPS Molve.



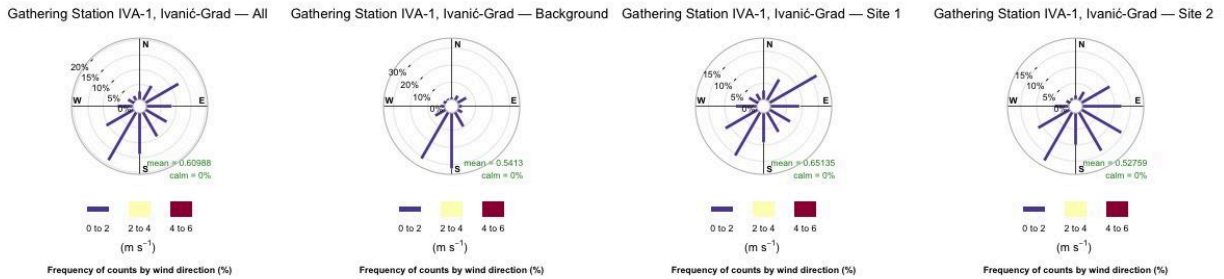
Original Figure A6. Wind observations during monitoring at background and industrial sites at Fractionation facilities Ivanić Grad



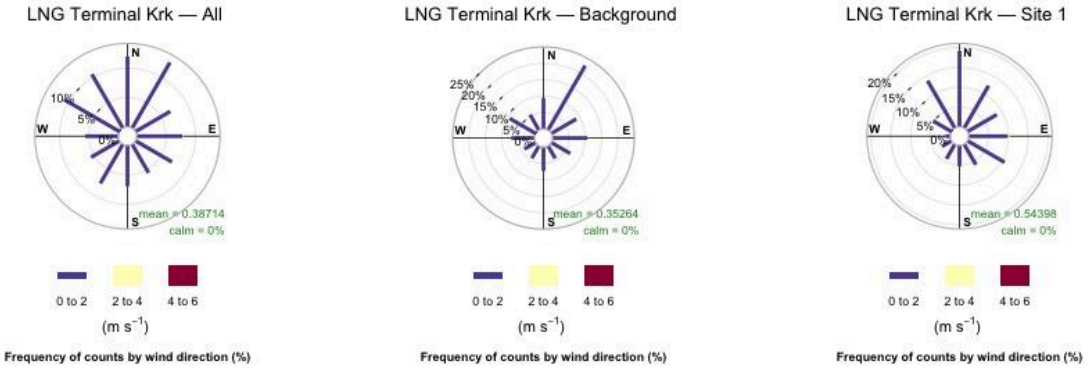
Revised Figure A6. Wind observations during monitoring at background and industrial sites at Fractionation facilities Ivanić Grad



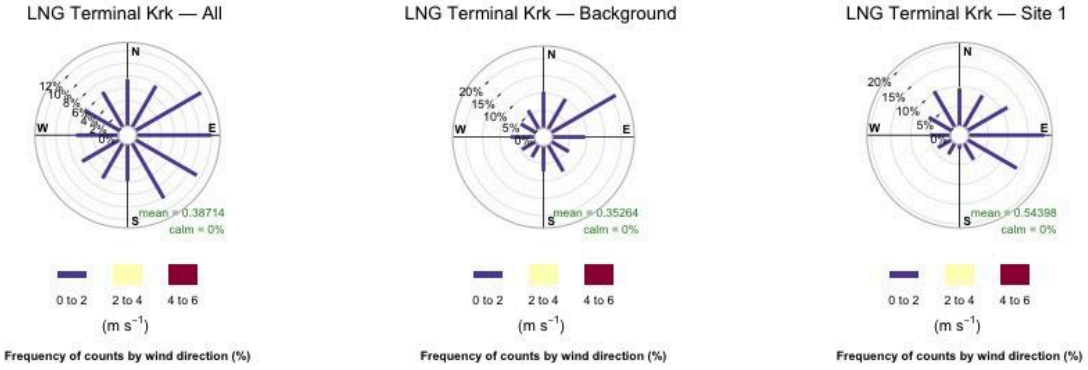
Original Figure A8. Wind observations during monitoring at background and industrial sites at Gathering Station IVA-1, Ivanić-Grad



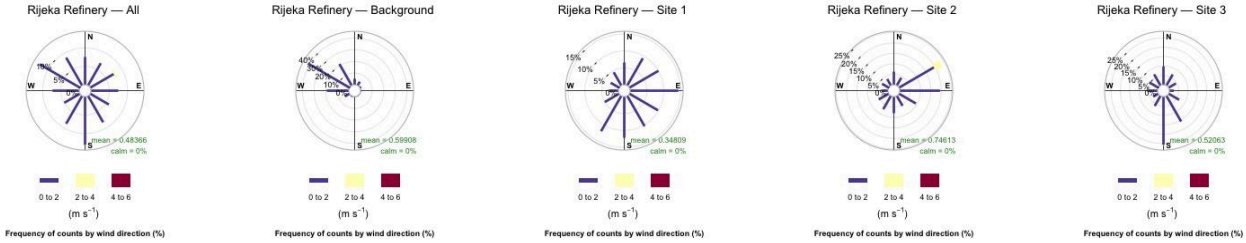
Revised Figure A8. Wind observations during monitoring at background and industrial sites at Gathering Station IVA-1, Ivanić-Grad



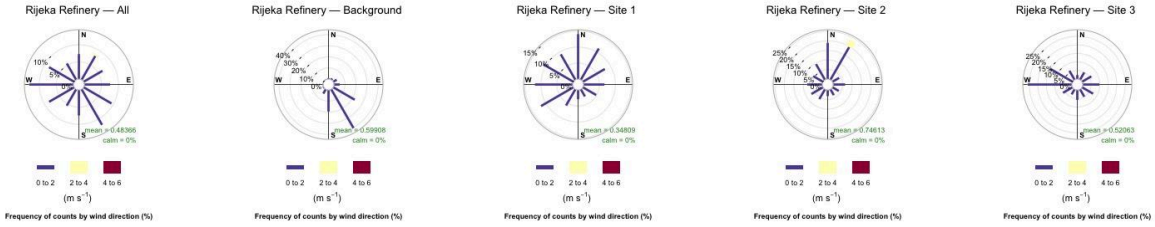
Original Figure A10. Wind observations during monitoring at background and industrial sites at LNG Terminal Krk



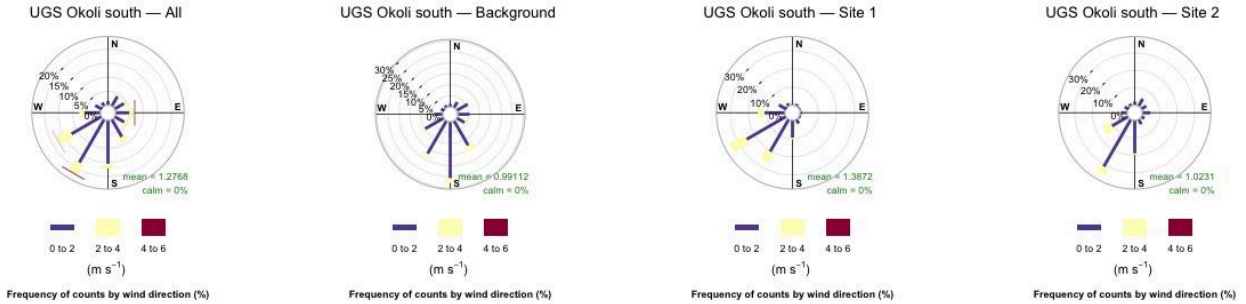
Revised Figure A10. Wind observations during monitoring at background and industrial sites at LNG Terminal Krk



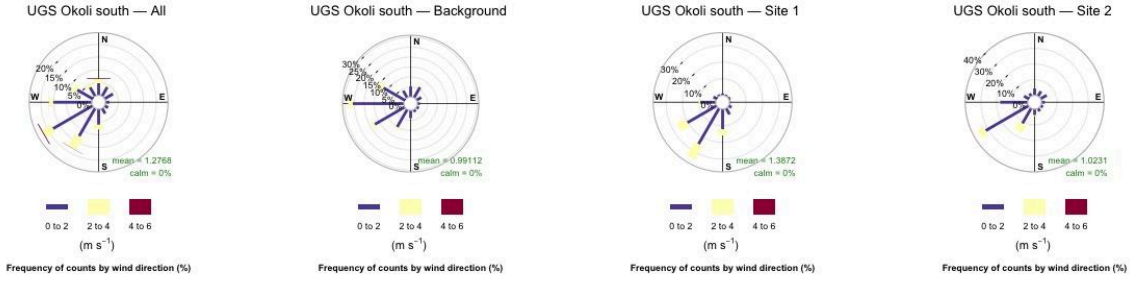
Original Figure A12. Wind observations during monitoring at background and industrial sites at Rijeka Refinery



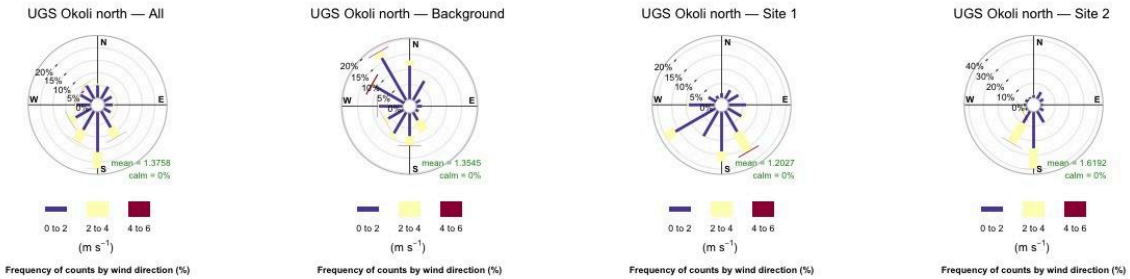
Revised Figure A12. Wind observations during monitoring at background and industrial sites at Rijeka Refinery



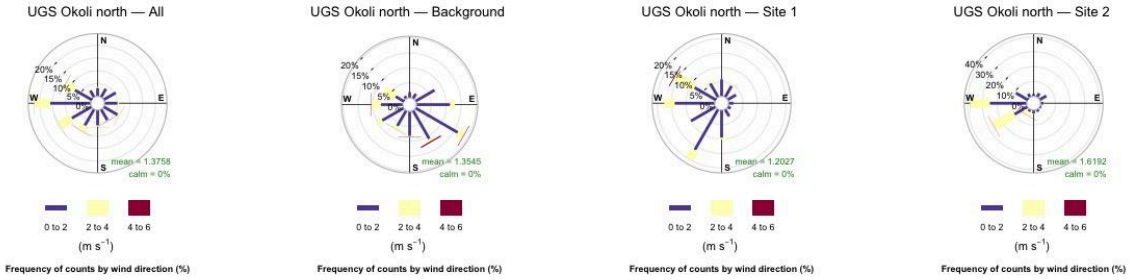
Original Figure A14. Wind observations during monitoring at background and industrial sites at Underground Gas Storage (UGS), Okoli south



Revised Figure A14. Wind observations during monitoring at background and industrial sites at Underground Gas Storage (UGS), Okoli south



Original Figure A16. Wind observations during monitoring at background and industrial sites at Underground Gas Storage (UGS), Okoli north



Revised Figure A16. Wind observations during monitoring at background and industrial sites at Underground Gas Storage (UGS), Okoli north[1]

[1] Windrose plots produced using 'openair', Carslaw, D. C. and K. Ropkins, (2012) openair --- an R package for air quality data analysis. Environmental Modelling & Software. Volume 27-28, 52-61.