



THE SCIPPER PROJECT

Shipping Contributions to Inland Pollution Push for the Enforcement of Regulations

EUROPEAN COMMISSION
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Written By	Daniëlle van Dinther (TNO)	20/12/2022
Approved by	Andreas Weigelt (BSH)	19/12/2022
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Description database

Within EU-project SCIPPER a large data amount of remotely measured Fuel Sulphur Content (FSC) have been gathered. These FSC data are calculated from measurements of SO₂, CO₂ and NO in the plumes of ships that pass by the measurement location. Long term data sets (>1 year) have been collected in Hamburg (Germany), Kiel (Germany), Rotterdam (the Netherlands) and Plymouth (United Kingdom, Penlee Point Atmospheric Observatoty, PPAO). Furthermore, short term data (≤2 months) have been collected in Öresund (Denmark) and at campaigns in Marseille (France) and in the Western English Channel (United Kingdom, Campaign 5, C5). All this data are collected and provided in an open access database consisting of a csv-file. Please note that all data are anonymised so that FSC measurements cannot be allocated to a specific ship.

The following data is given in the database:

- Date of measurements: dd-mm-yyyy
- FSC: % S m/m
- Absolute uncertainty in FSC: % S m/m
- FSC minus Uncertainty: % S m/m
- Compliance: 1 (compliant) and 0 (non-compliant)
- Location: C5 (Campaign 5, Western English Channel), H (Hamburg), K (Kiel), M (Marseille), O (Öresund), P (Plymouth), R (Rotterdam).

Table 1 depicts which time periods are available for the different measurement locations.

Table 1: Time series available in the database for the different measurement locations.

Location	Station type	Time period
Rotterdam	Long term	10-2019 till 07-2022 ¹
Hamburg	Long term	05-2019 till 04-2022
Kiel	Long term	05-2019 till 04-2022
Plymouth (PPAO)	Long term	02-2019 till 10-2021
Plymouth (C5)	Campaign	19 and 22 May 2022
Öresund	Campaign	11-2021 and 12-2021
Marseille 2019	Campaign	17 till 20 Sept 2019
Marseille 2021	Campaign	5 till 22 July 2021

The full dataset can be downloaded from the following link: <https://aix.meng.auth.gr/SCIPPER/>

A short description of the measurement locations, some statistical analysis of the database content and basic conclusions which can be drawn are given in SCIPPER D2.5. A more detailed description of the measurement uncertainty, as well as results of comparative measurements are given in SCIPPER D2.3.

References

SCIPPER D2.3, 2022. Mellqvist, J., Beecken, J., Conde, V., van Dinther, D., Duyzer, J., Griesel, S., Irjala, M., Knudsen, B., Knudsen, J., Moerman, M., Ntziachristos, L., Weigelt, A.: Quality assurance of remote monitoring systems and harmonized reporting. EU Horizon 2020 project No. 814893. <https://www.scipper-project.eu/library/>.

SCIPPER D2.5, 2022. van Dinther, D., Duyzer, J., Weigelt, A., Beecken, J., Mellqvist, J., Vonde, V., Yang, M.X., Pewter, J., Smyth, T.: On-shore monitoring of Fuel Sulphur Content within SCIPPER. EU Horizon 2020 project No. 814893. <https://www.scipper-project.eu/library/>.

¹ In this time period data from 17-6-2020 till 23-2-2021 are excluded due to issues with the NO monitor as well as data from 27-5-2021 till 31-5-2022 due to a different SO₂ monitor with a different time response.