

## CORONASTEP Report 20 (Annex) SARS-CoV-2 Sewage Surveillance in Luxembourg

### Summary

The present document 20 reports the results about the SARS-CoV-2 contamination of wastewater at the inlet of the wastewater treatment plants (WWTP) at the middle of the week 45. On Wednesday, eleven separate WWTPs have been sampled.

During the week 45, the fluxes of SARS-CoV-2 RNA in the wastewater treatment plants have very comparable to those observed at the beginning of the week 45 and during the week 44. The level of contamination remains in the eleven WWTPs analysed at high values of SARS-CoV-2 fluxes, indicating a still very high prevalence of the virus in the wastewater (Figures 1a and 1b). Thus, the detection of SARS-CoV-2 in wastewater remains at a very high level on a national scale, but it has stopped increasing. The situation seems to have stabilised, but there is no clear improvement (decrease) at the moment.

Table 1 – National level of SARS-CoV-2 contamination of wastewaters in Luxembourg.

 Dark green: negative samples for SARS-CoV-2 gene E (-), Green to red: positive samples for SARS-CoV-2 gene E. The intensity of the color is related to the national SARS-CoV-2 flux (RNA copies / day / 100 000 equivalent inhabitants).

	First Wave															
Week	Week 3	Week 7	Week 9	Week 11	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25
National Contamination Level																

	Second wave																						
Week	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	Week 41	Week 42	Week 43	Week 44	Week 44-2	Week 45-1	Week 45-2	
National Contamination Level																							

Figure 1a – RT-qPCR quantification time-course monitoring of SARS-CoV-2 (E gene) in Luxembourgish wastewater samples from December 2019 to November 2020. Grey squares: daily-confirmed cases for Luxembourgish residents (<https://data.public.lu/fr/datasets/donnees-covid19/>), Blue dots: cumulative SARS-CoV-2 flux (RNA copies / day / 100 000 equivalent inhabitants).

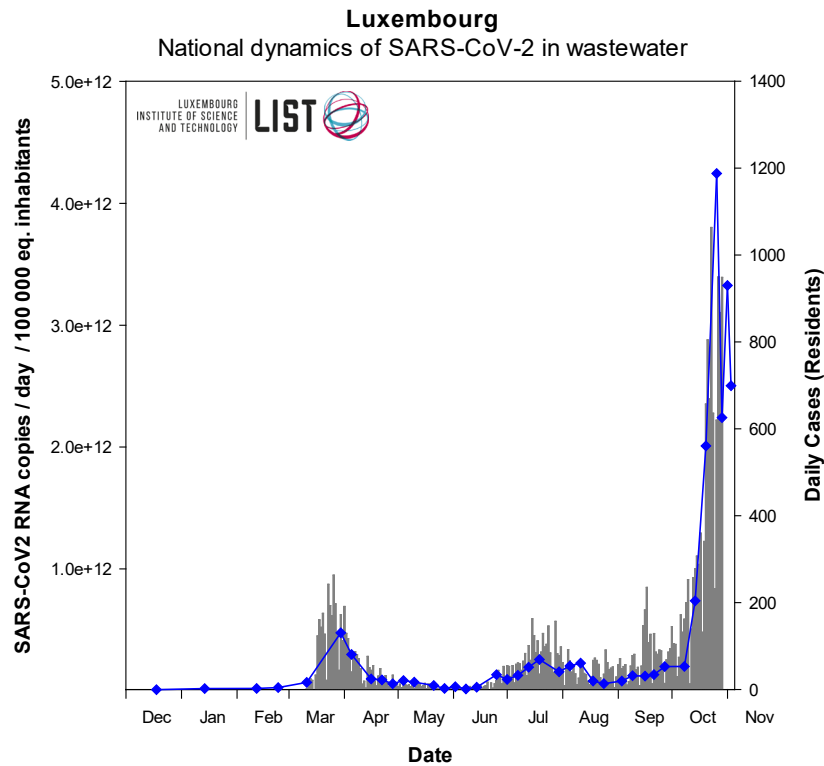


Figure 2b – Close-up of Figure 1a showing results from September 1<sup>st</sup> on.

