The supplementary material is organized as follows. Figure S1 shows the Summary of total Argentine emissions of different pollutants and sectors for year 2019 within the GEAA-AEIv3.0M inventory. Figure S2 to Figure S17 show the monthly and annual variations for all the sectors analyzed. In all Figures, left vertical axis shows the emissions for each polluting species in Megagrams (Mg), while right vertical axis refers only to CO_{2eq} emissions in Gigagrams (Gg). Table S1 and Table S2 show the comparison of GEAA-AEIv3.0M Vs EDGAR inventories for GHG and other species (NO_x, CO, PM_{10} and $PM_{2.5}$) respectively. All abbreviations and codes shown in this supplementary material correspond to the definitions in Table 1a of the main text of this manuscript. The whole inventory dataset (monthly grilled 1995-2020) for 12 polluting species from 15 sectors is available in a freely accessible repository (http://dx.doi.org/10.17632/d6xrhpmzdp.1). The next table of contents has the list with hyperlinks to reach each figure or table.

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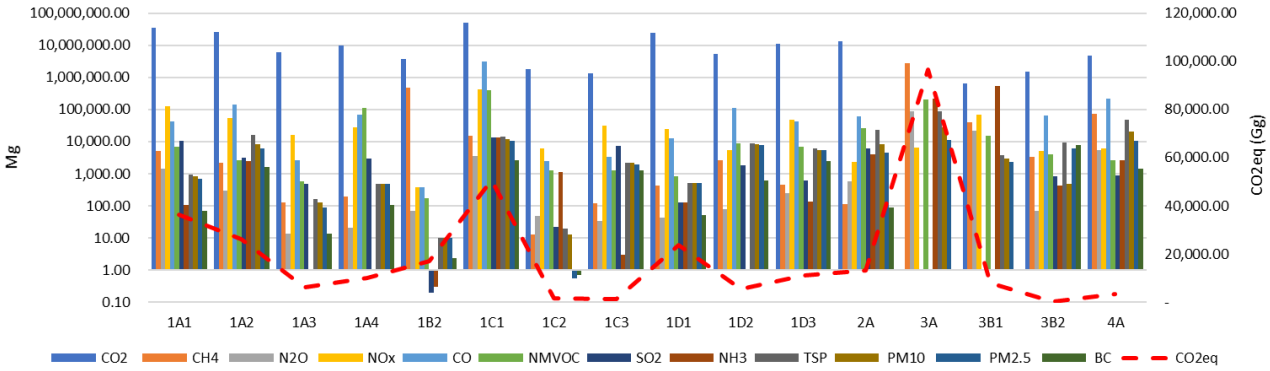

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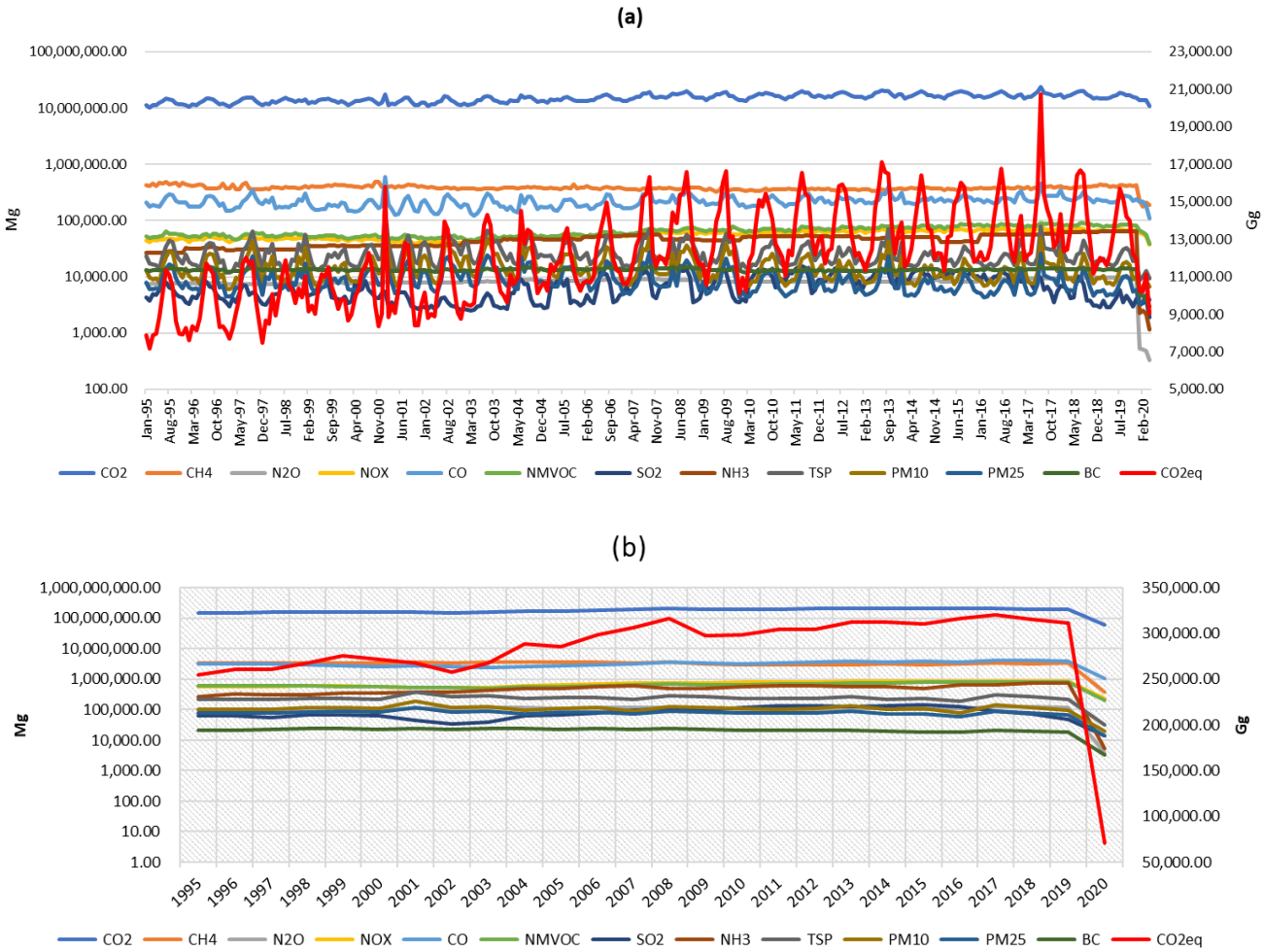
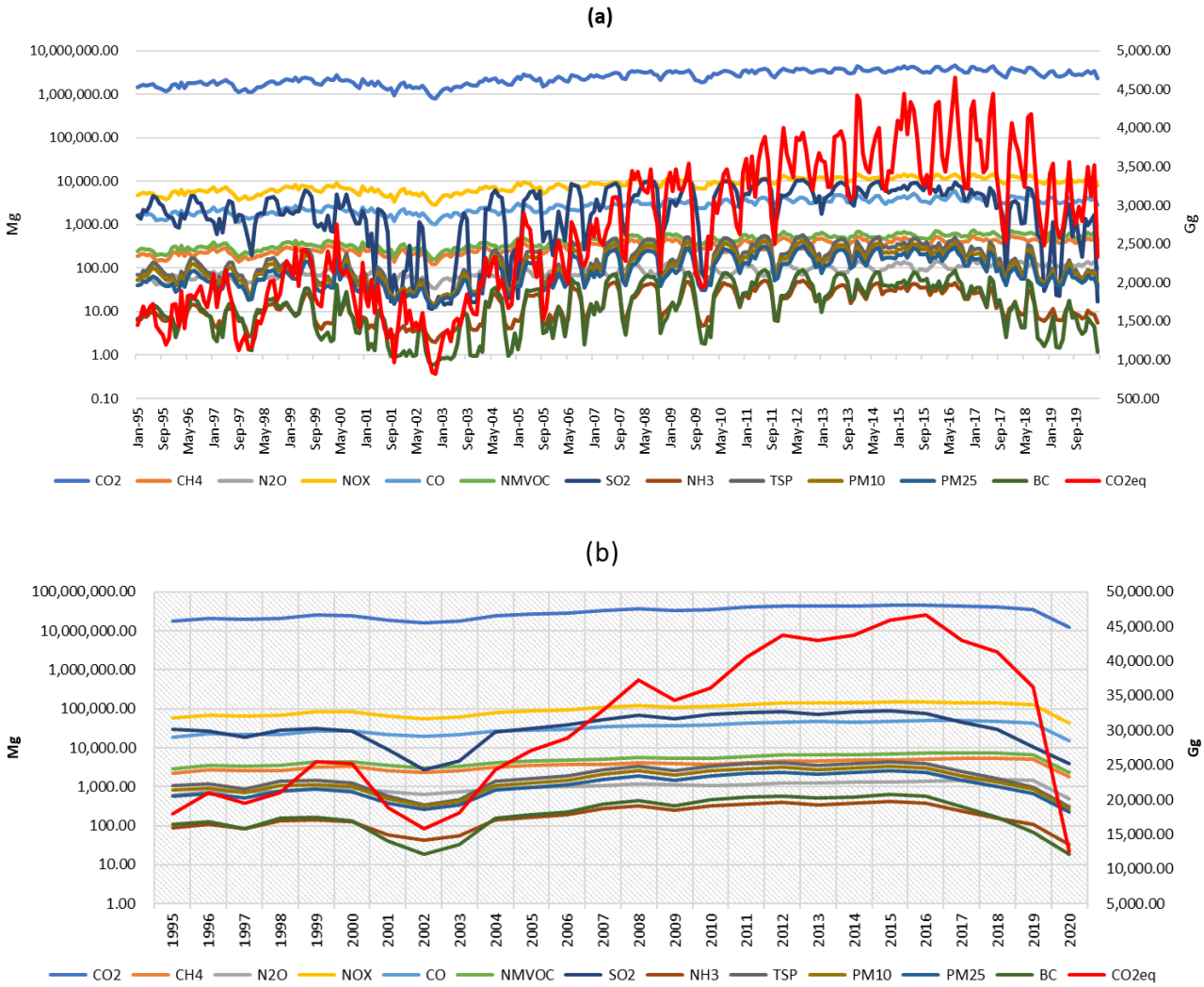


Figure S2 Monthly (a) and annual (b) emissions for all sectors (a). All CO_{2eq} values are in Gg.



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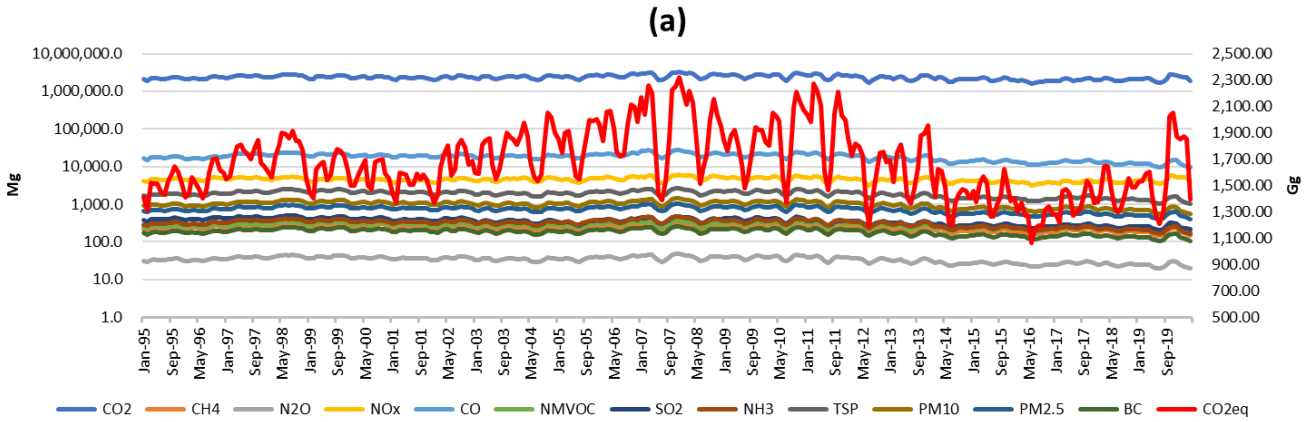

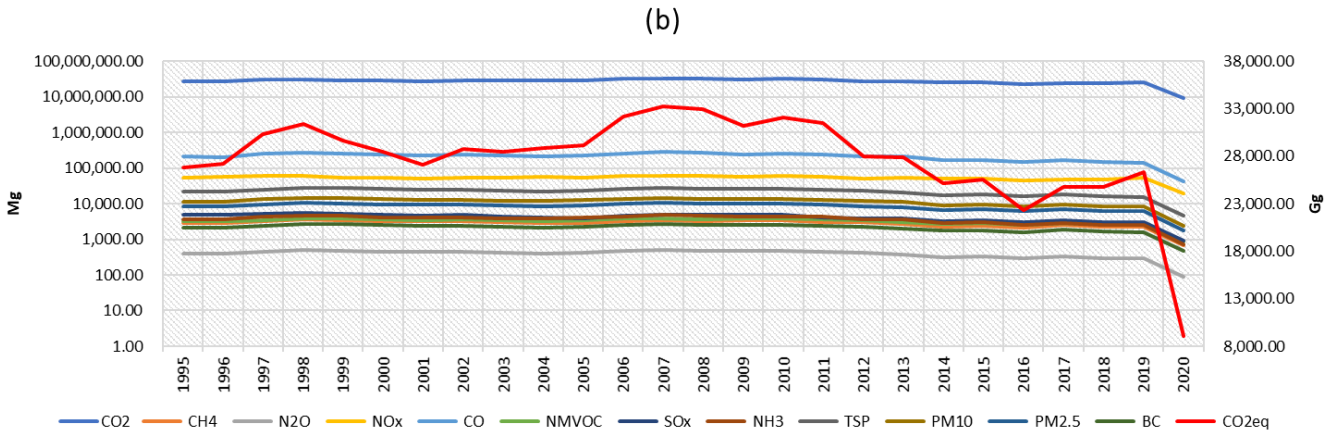

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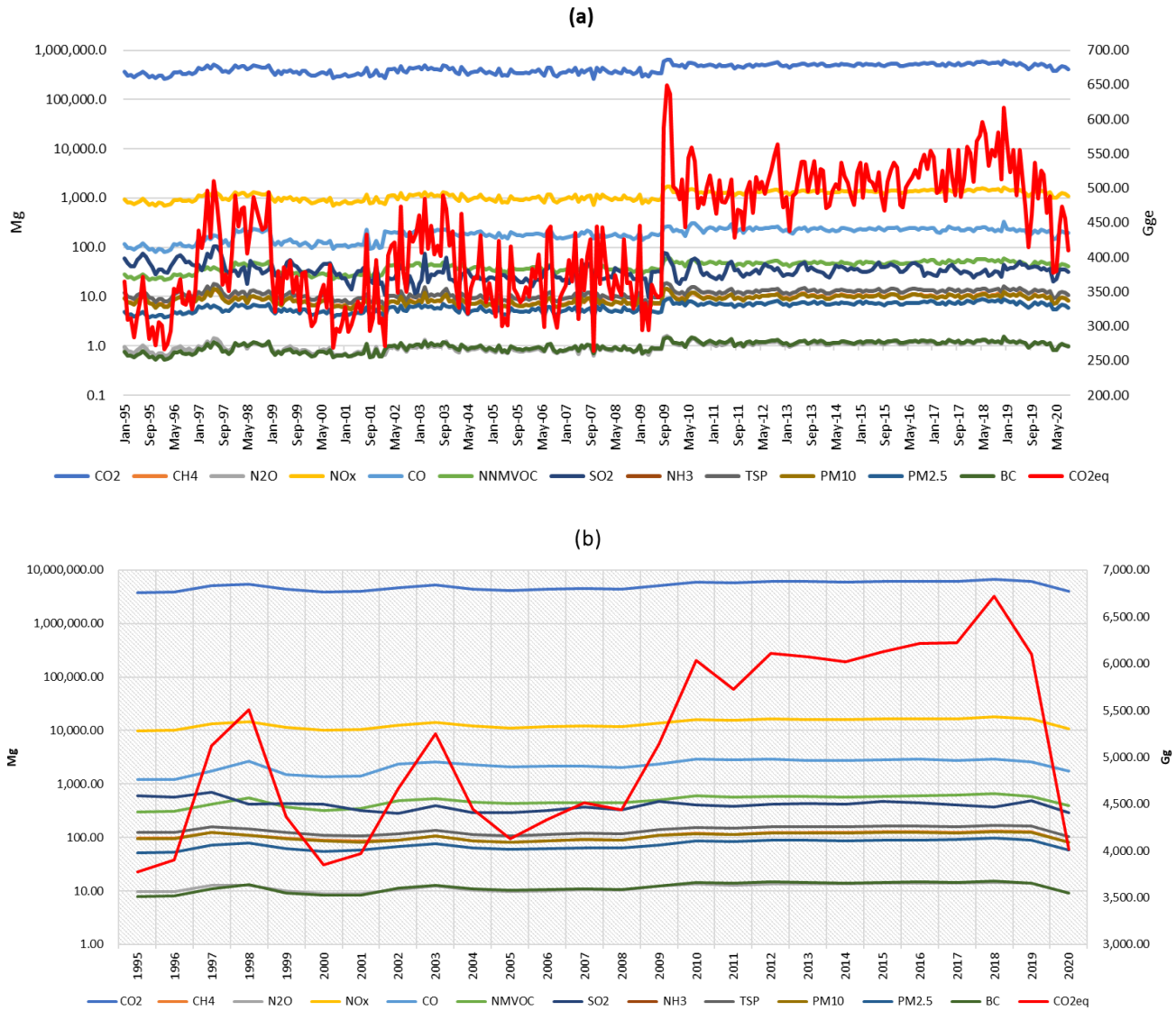

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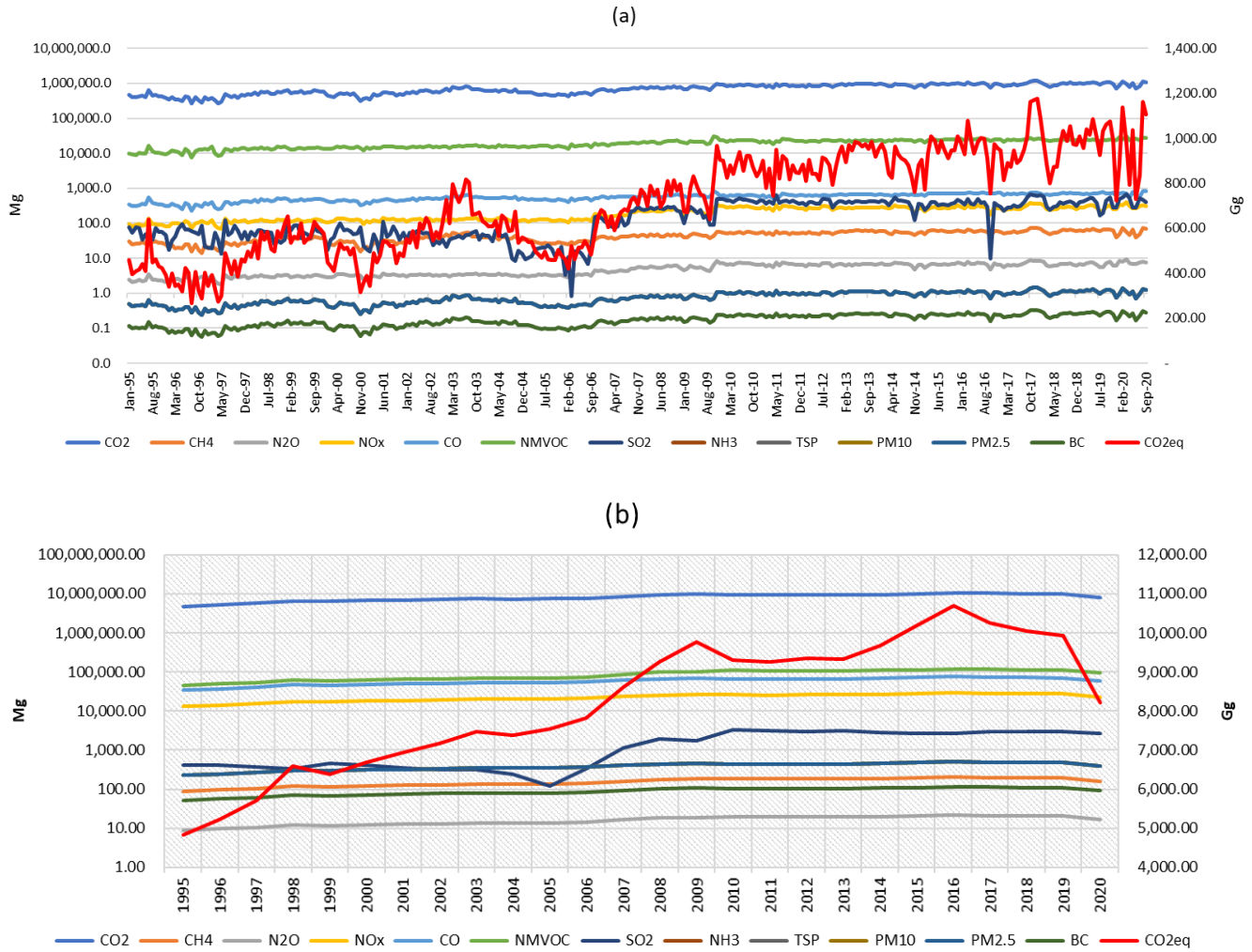

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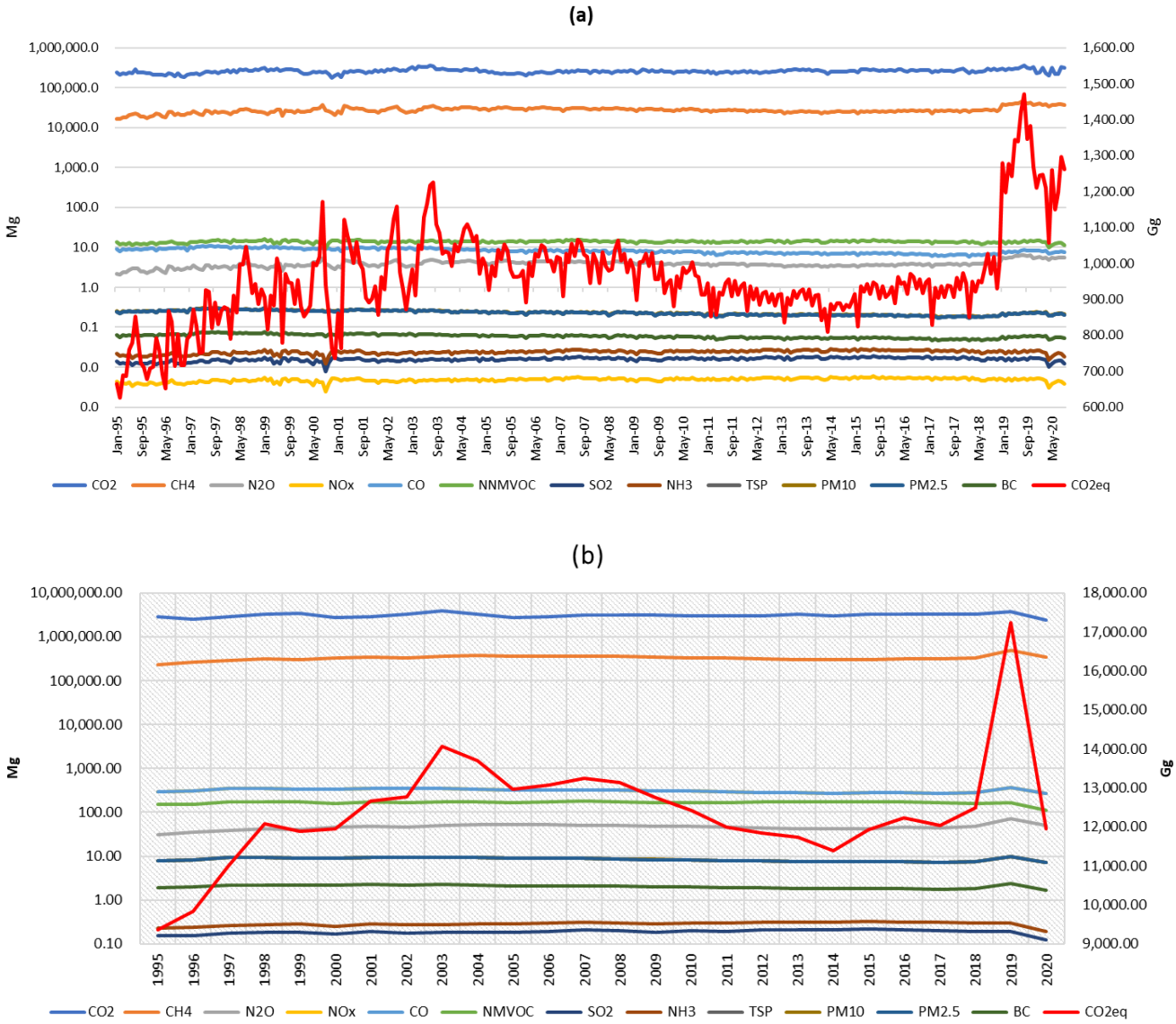
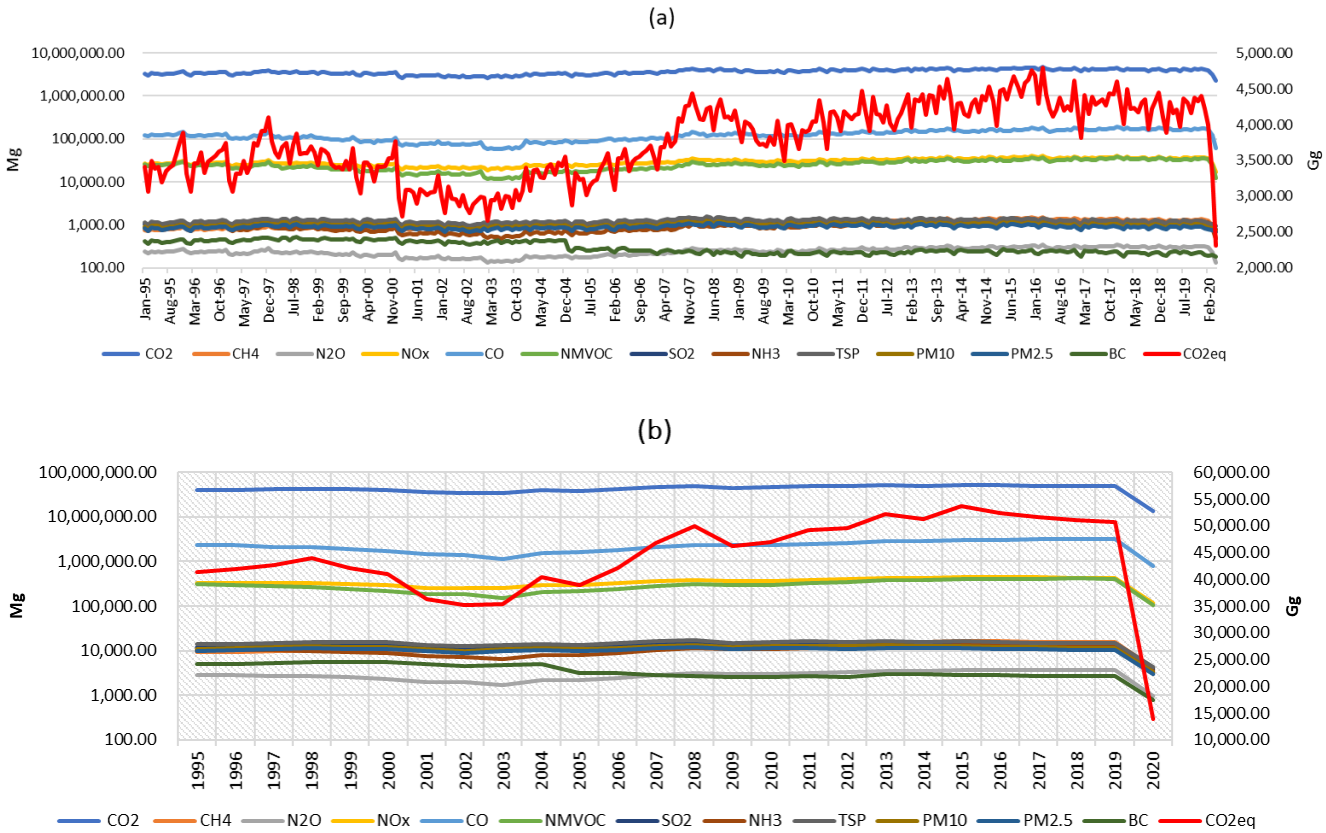


Figure S7. Monthly (a) and annual (b) emissions from refineries, and gas and oil production (venting and flare) (FUG: 1B2). All CO_{2eq} values are in Gg.



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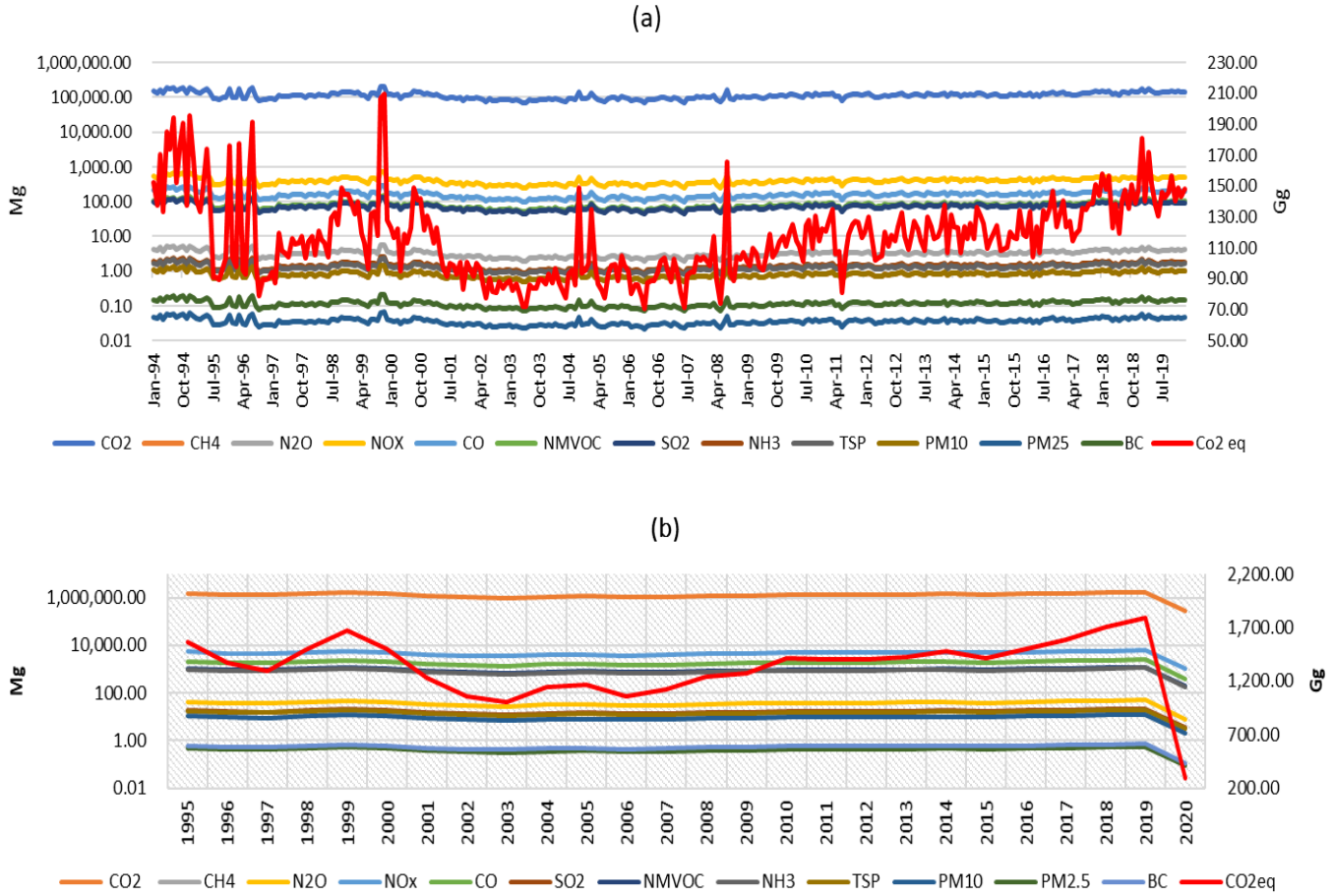

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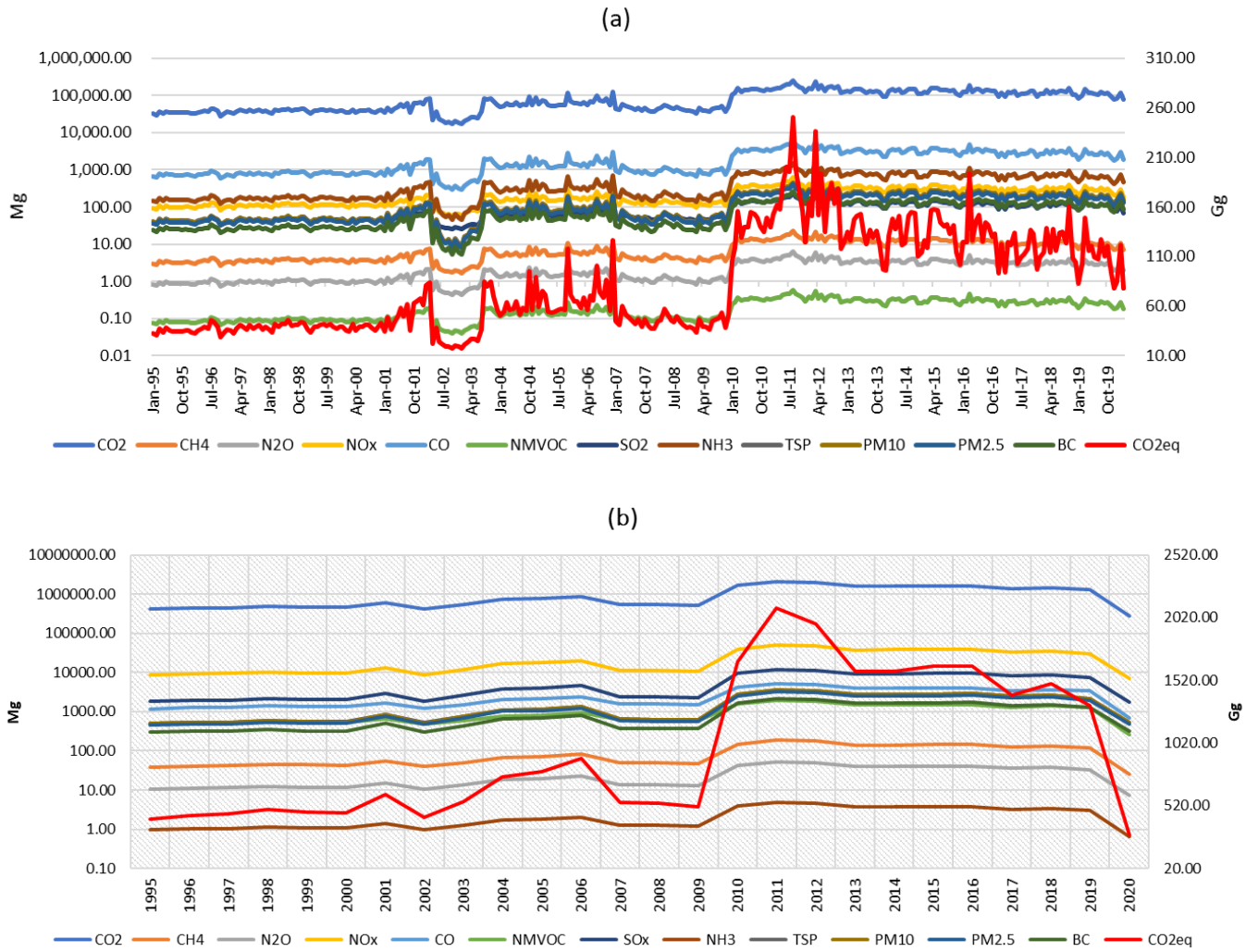

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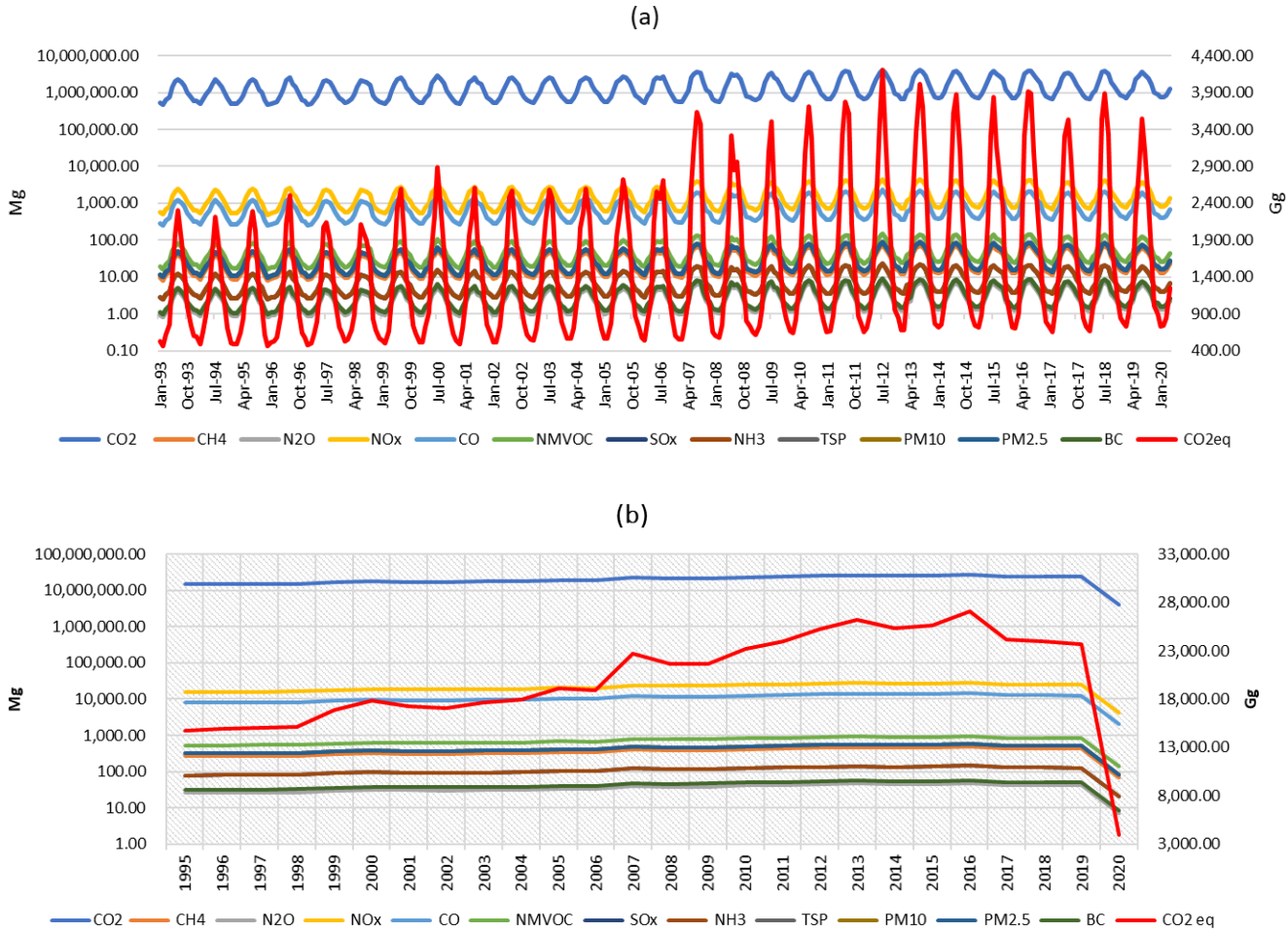
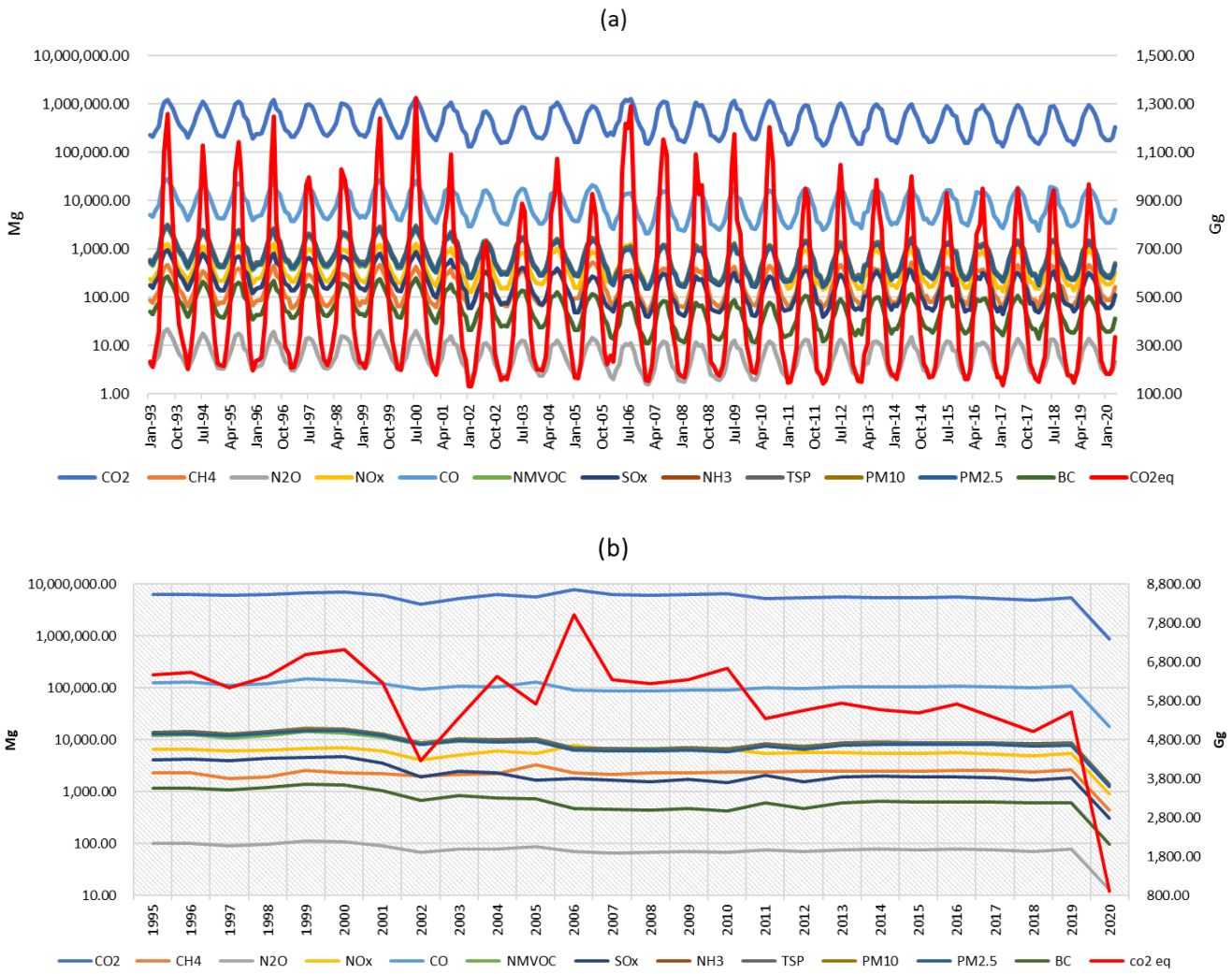


Figure S11. Monthly (a) and annual (b) emissions from Residential, Commercial and Governmental sectors, for natural gas use (R+C: 1A4a, b,c). All CO_{2eq} values are in Gg.



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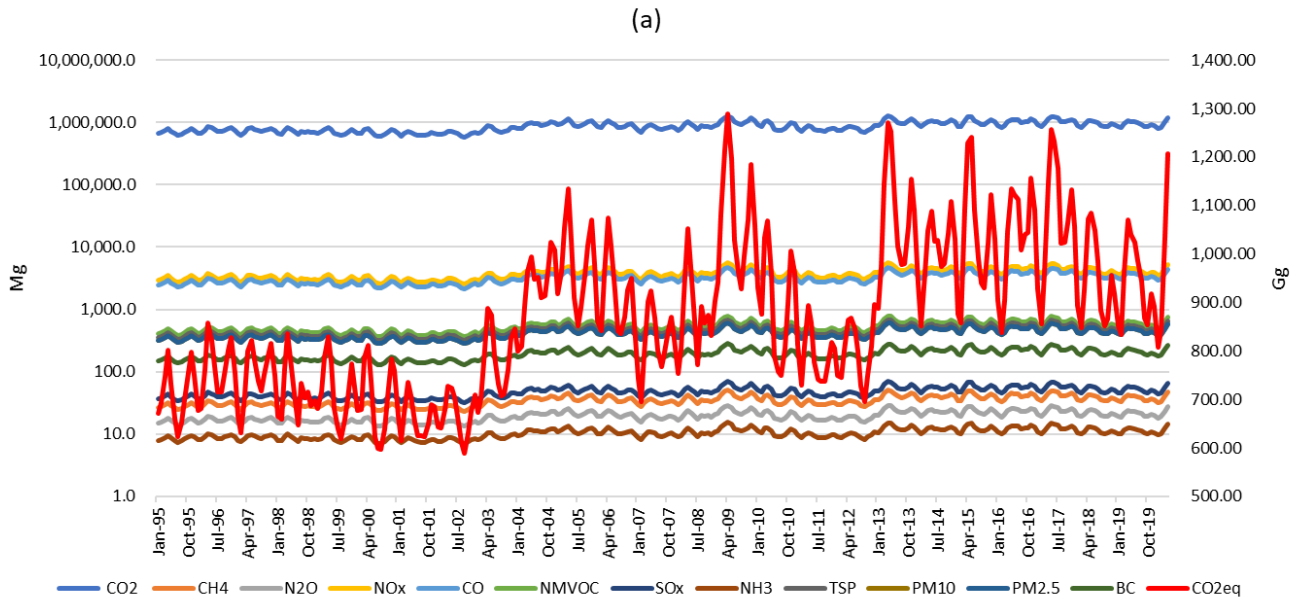


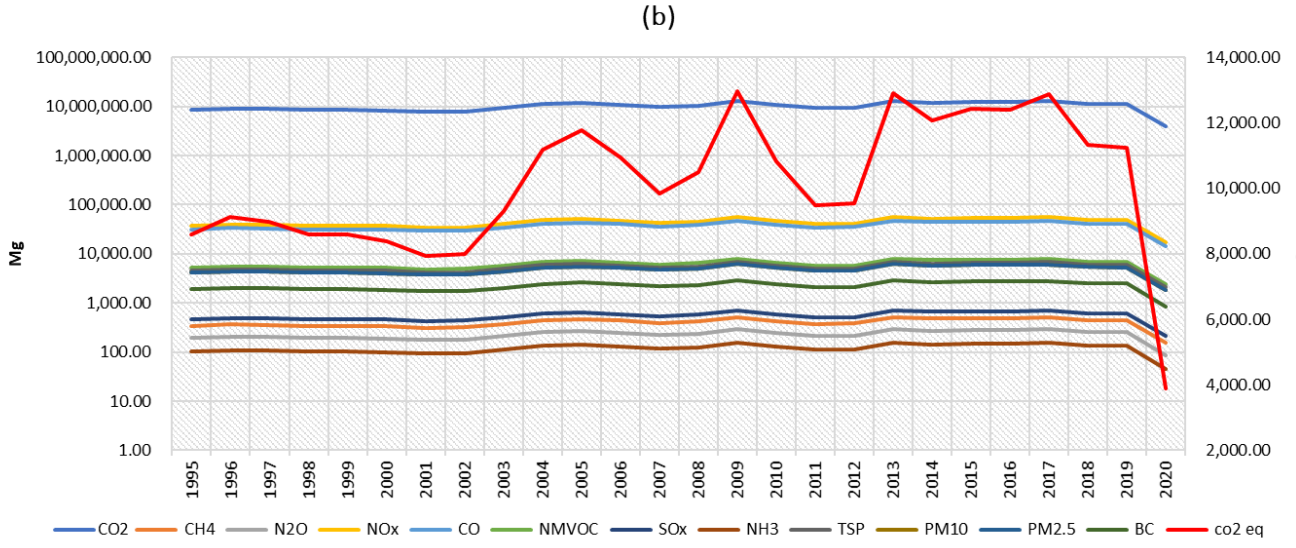


Figure S13. Monthly (a) and annual (b) emissions from agriculture and other sectors. All CO_{2eq} values are in Gg.

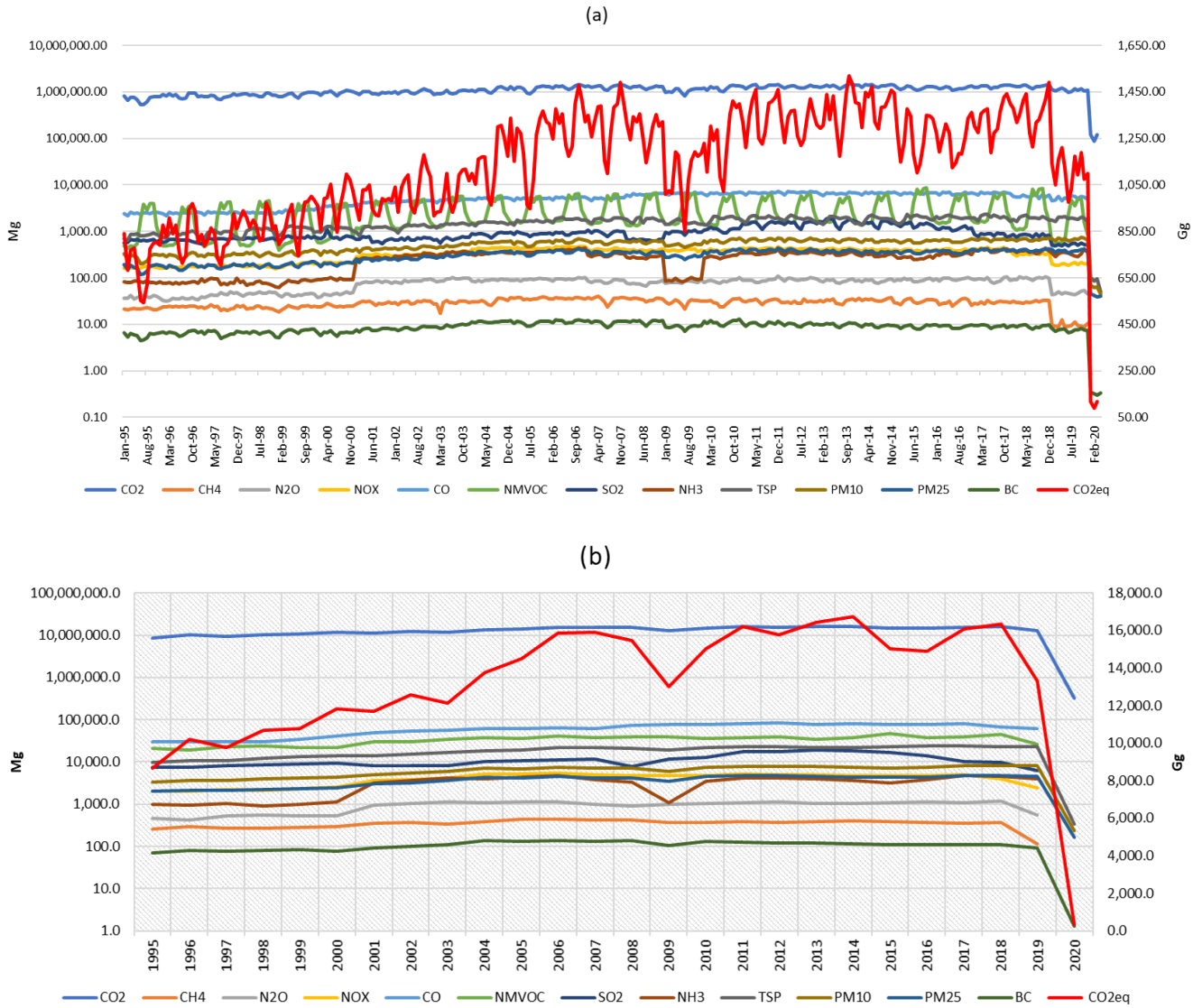


Figure S14. Monthly (a) and annual (b) emissions from production manufacturing industries. All CO_{2eq} values are in Gg.

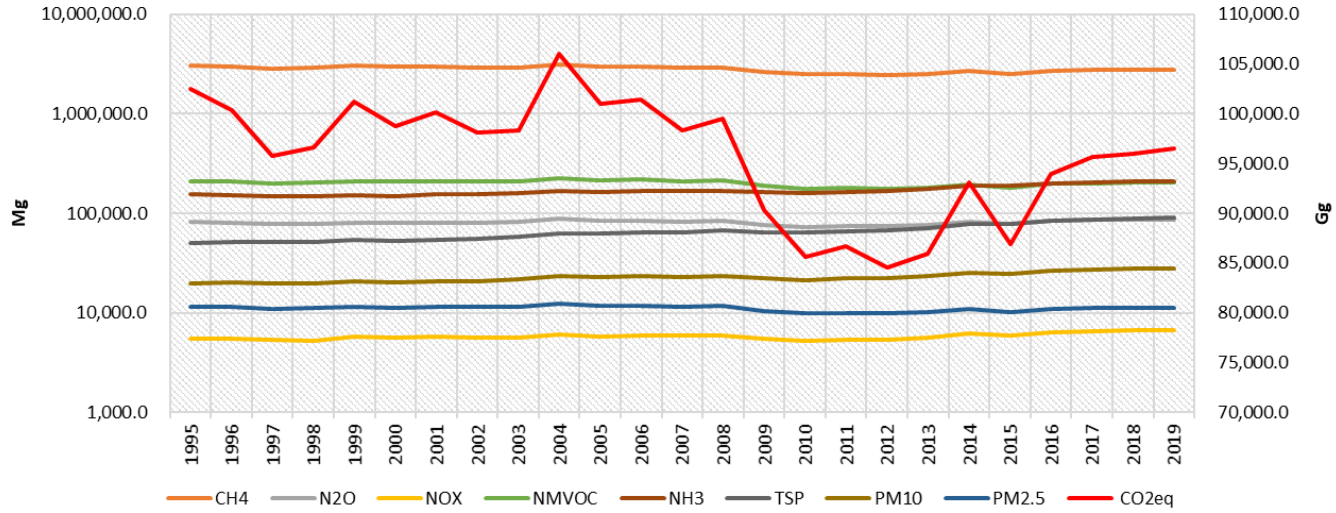
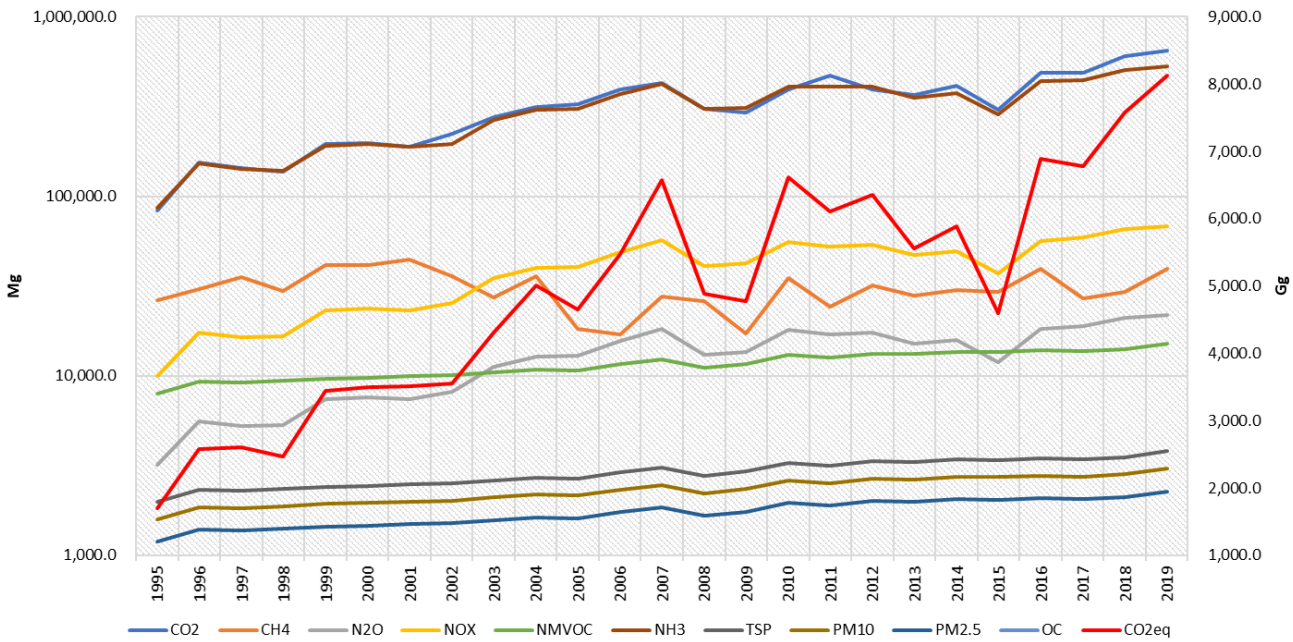


Figure S15. Annual emissions from livestock production (LF: 4A + 4B). All CO_{2eq} values are in Gg.



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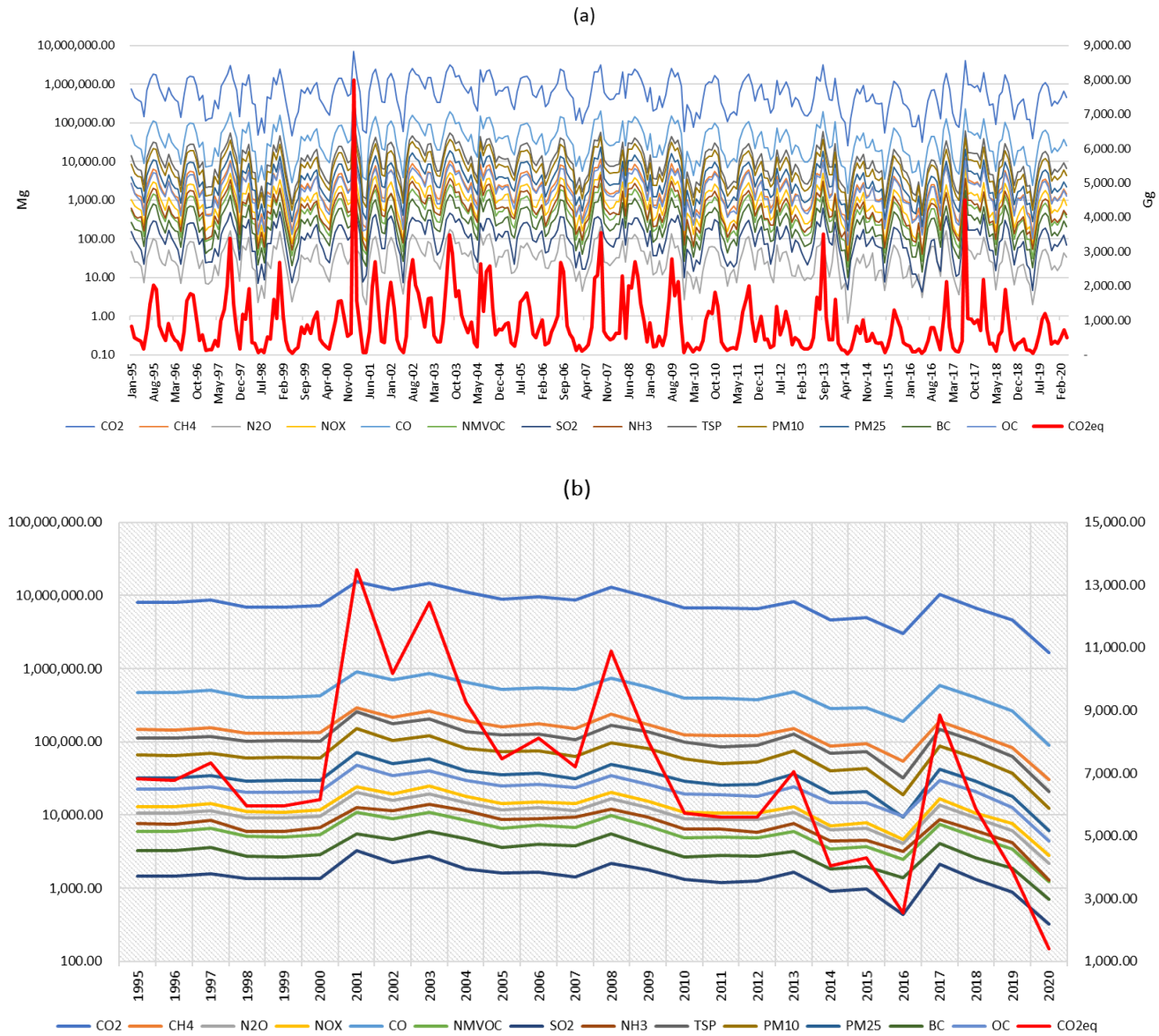

Figure S17. Monthly (a) and annual (b) emissions from biomass burning (OBB AWB: 4F). All CO_{2eq} values are in Gg.

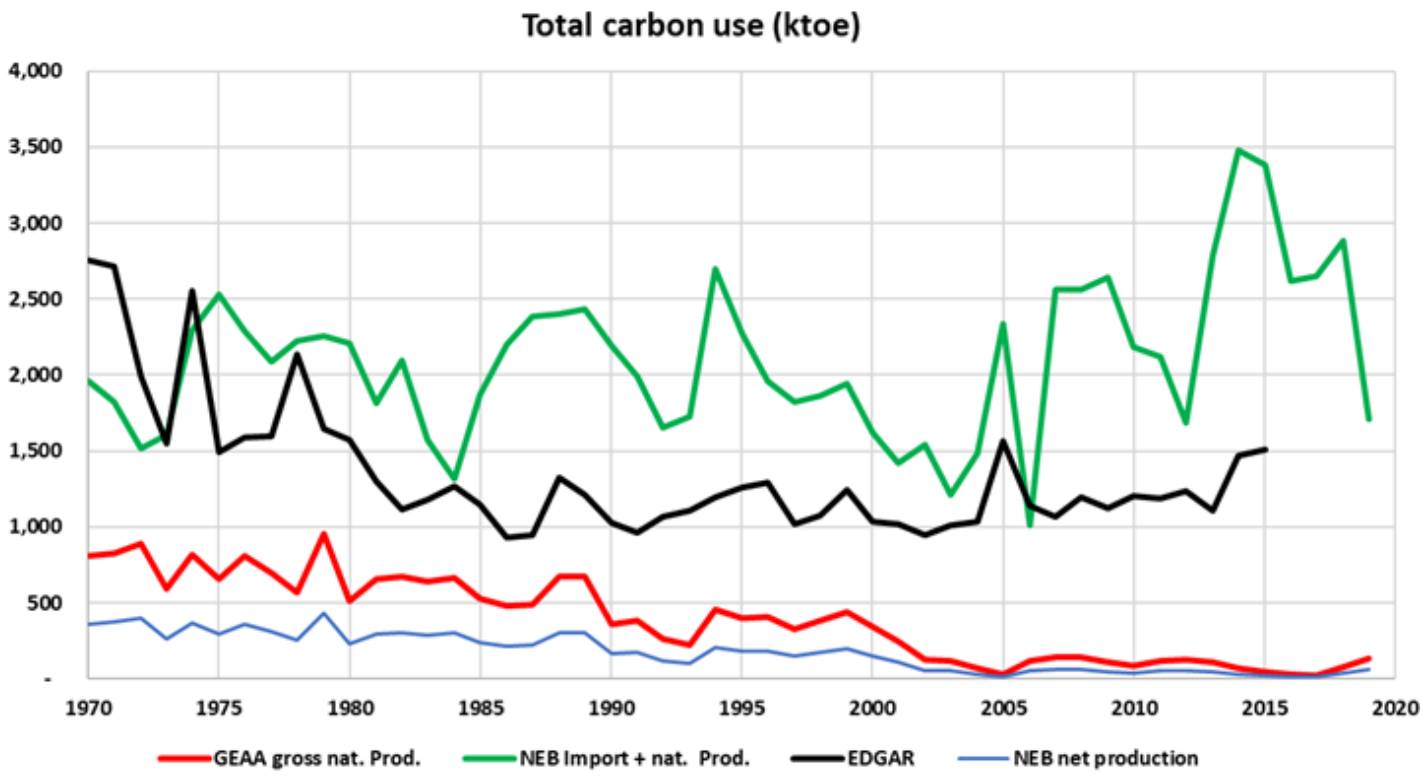

Figure S18: Coal production and coal import in Argentina (ktoe). Red line data used in GEAA (only national coal gross production), green line: National Energy Balance (NEB) data of import + national net production; blue line NEB net coal production; black line: estimation of EDGAR data.