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Supplement of

A model study on changes of European and Swiss particulate matter, ozone and nitrogen deposition between 1990 and 2020 due to the revised Gothenburg protocol

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Supplementary material:

Figure S1: Annual average $PM_{2.5}$ ($\mu g m^{-3}$) over the European (upper panel) and Swiss (lower panel) domains for the reference case (2005).

Figure S2: Annual average O_3 mixing ratios (ppb) over the European (upper panel) and Swiss (lower panel) domains for the reference case (2005).

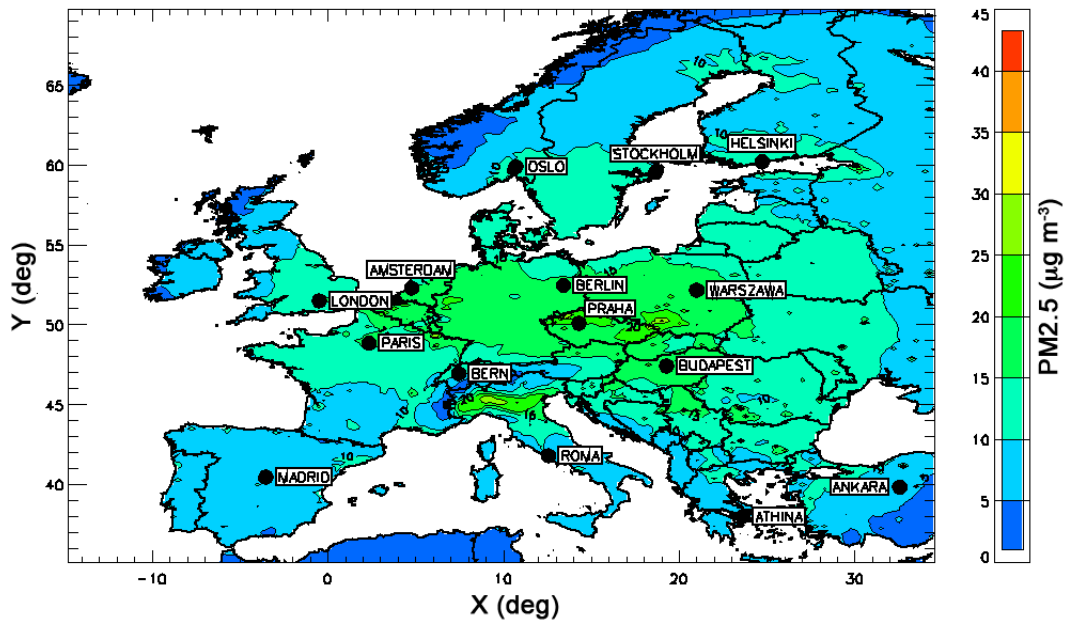
Figure S3: Relative changes in AOT40 over the European domain, BL 2020- 2005 (upper panel) and MTFR 2020- 2005 (lower panel).

Figure S4: Relative changes in AOT40 over the Swiss domain, BL 2020 - 2005 (upper panel) and MTFR 2020- 2005 (lower panel).

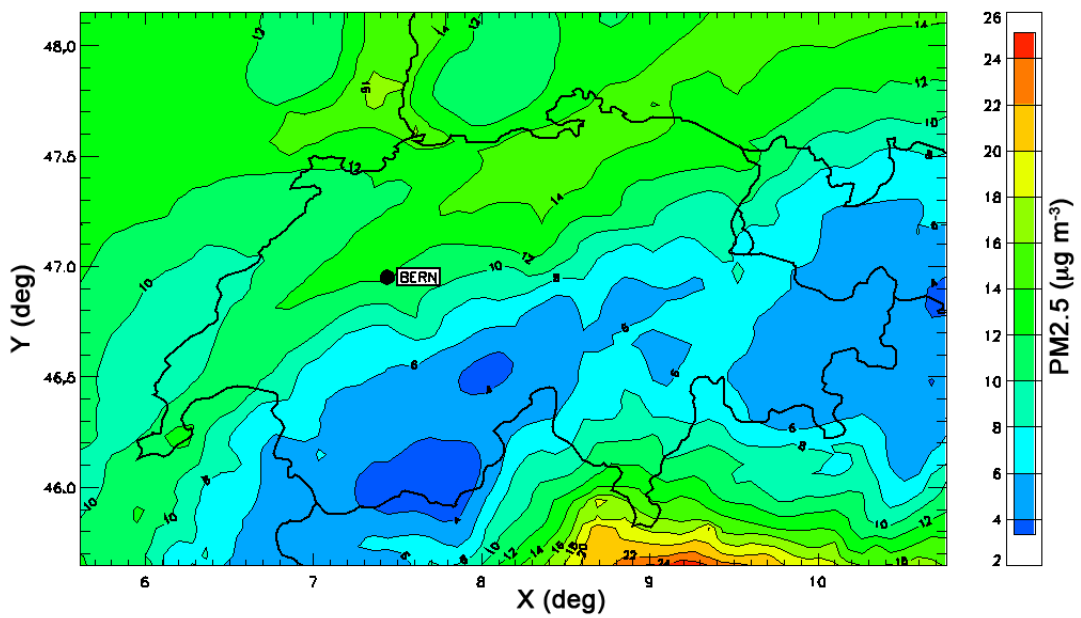
Figure S5: Relative changes in SOMO35 over the European domain for two scenarios: BL 2020- 2005 (upper panel) and MTFR 2020 – 2005 (lower panel).

Figure S6: Relative changes in SOMO35 over the Swiss domain for two scenarios: BL 2020- 2005 (upper panel) and MTFR 2020 – 2005 (lower panel).

Figure S7: Dry (upper panel) and wet (lower panel) nitrogen deposition ($kg N ha^{-1} y^{-1}$) over the European domain (2006).



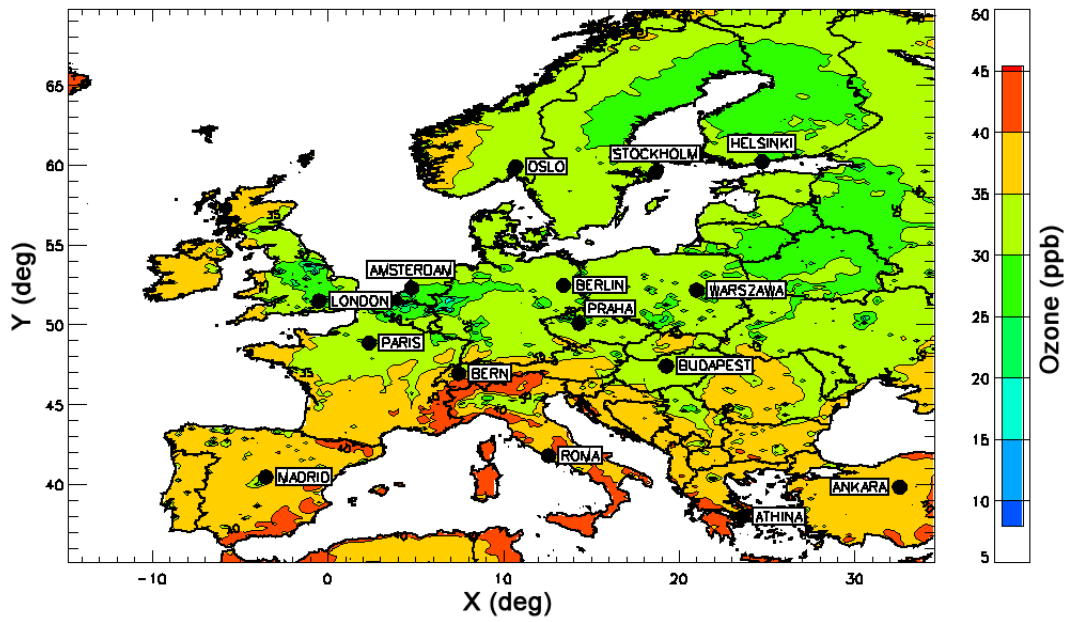
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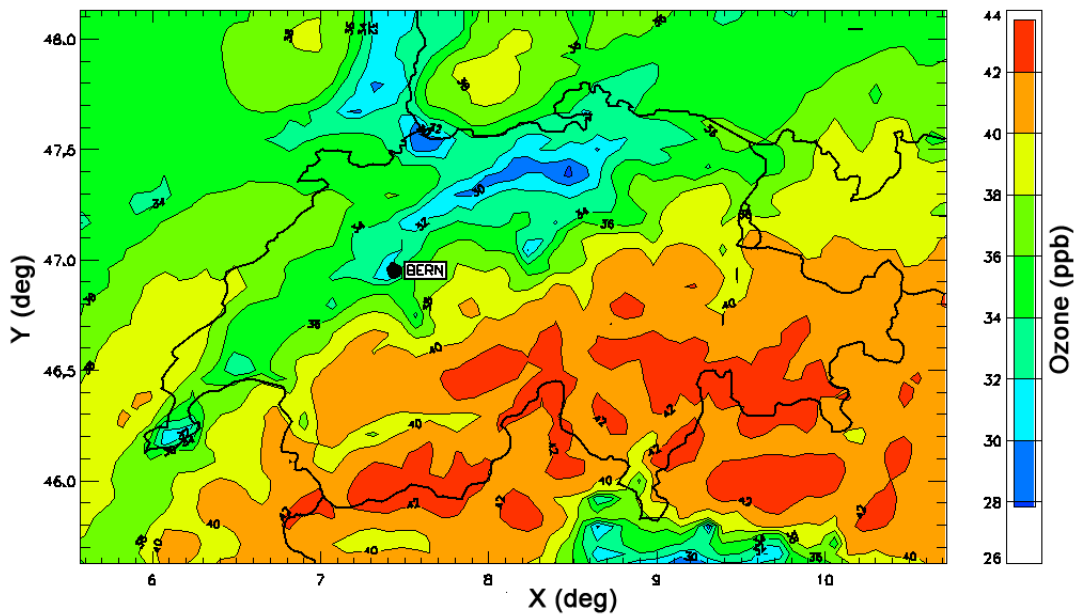
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 3 Figure S1: Annual average PM_{2.5} ($\mu\text{g m}^{-3}$) over the European (upper panel) and Swiss
 4 (lower panel) domains for the reference case (2005).

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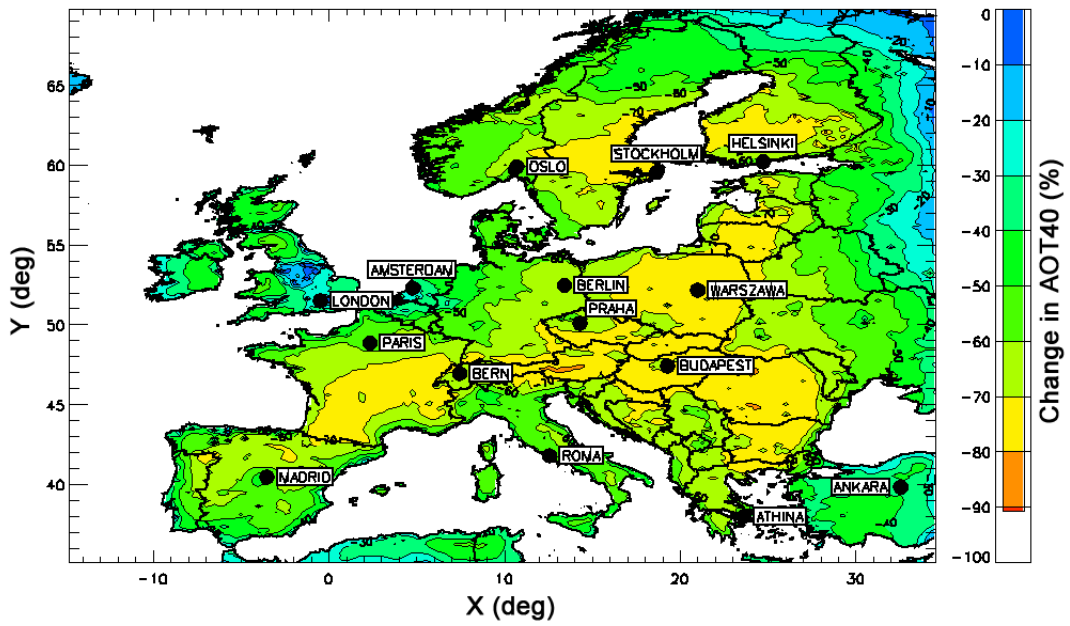


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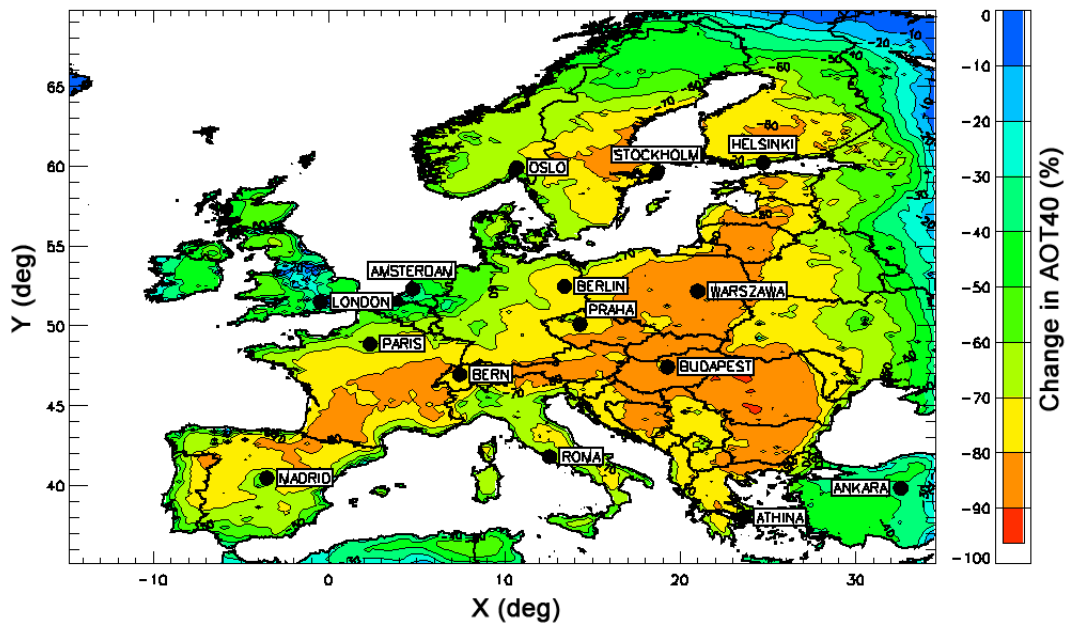
3 Figure S2: Annual average O₃ mixing ratios (ppb) over the European (upper panel) and
 4 Swiss (lower panel) domains for the reference case (2005).

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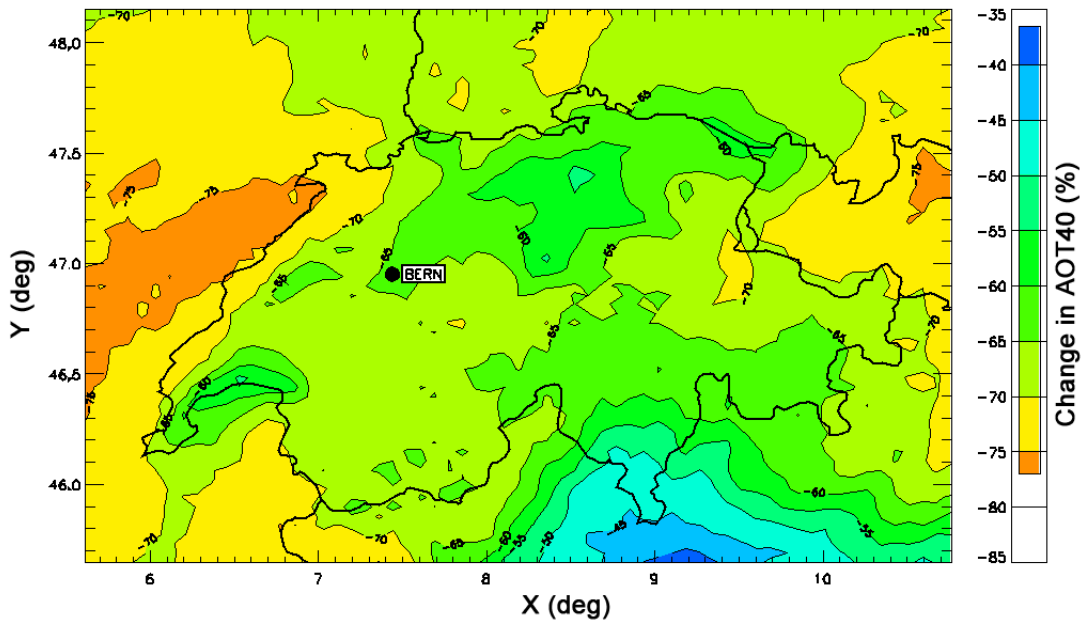
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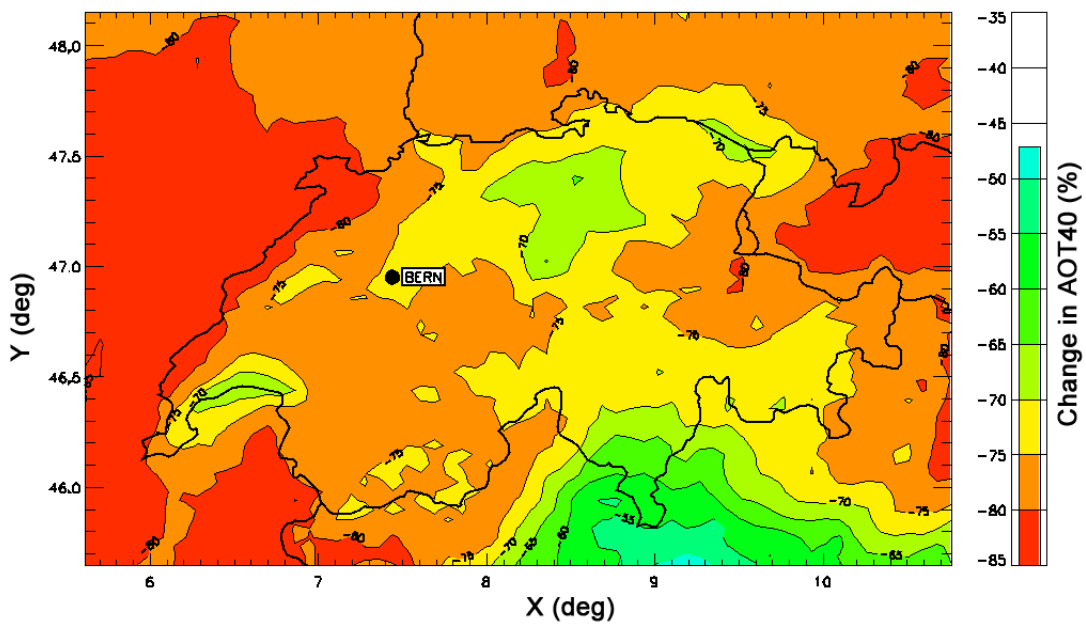
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 3 Figure S3: Relative changes in AOT40 over the European domain, BL 2020- 2005
 4 (upper panel) and MTFR 2020- 2005 (lower panel).

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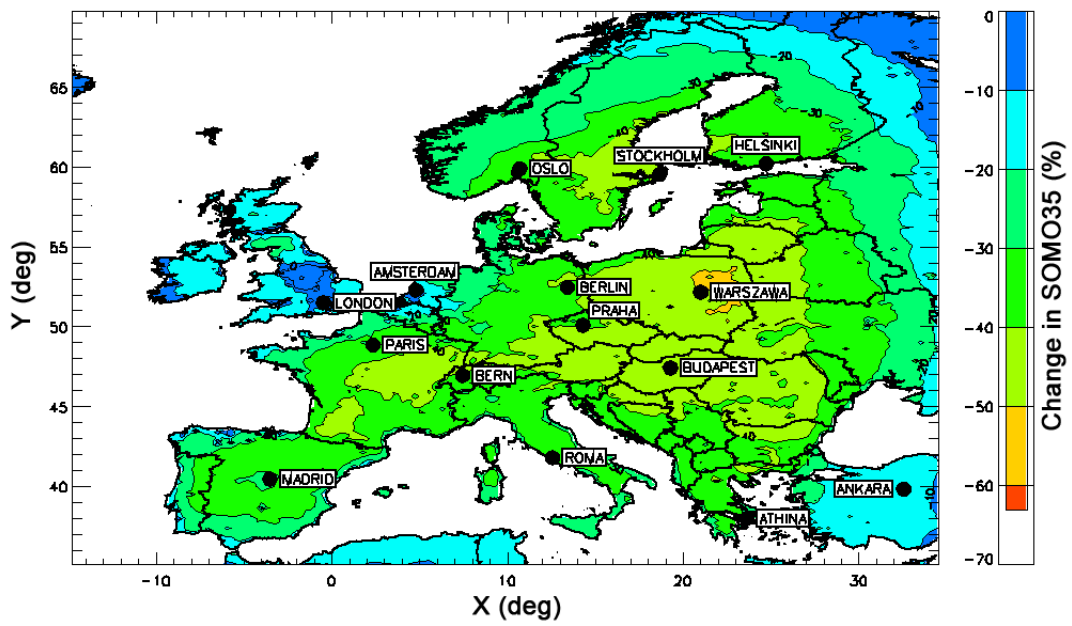
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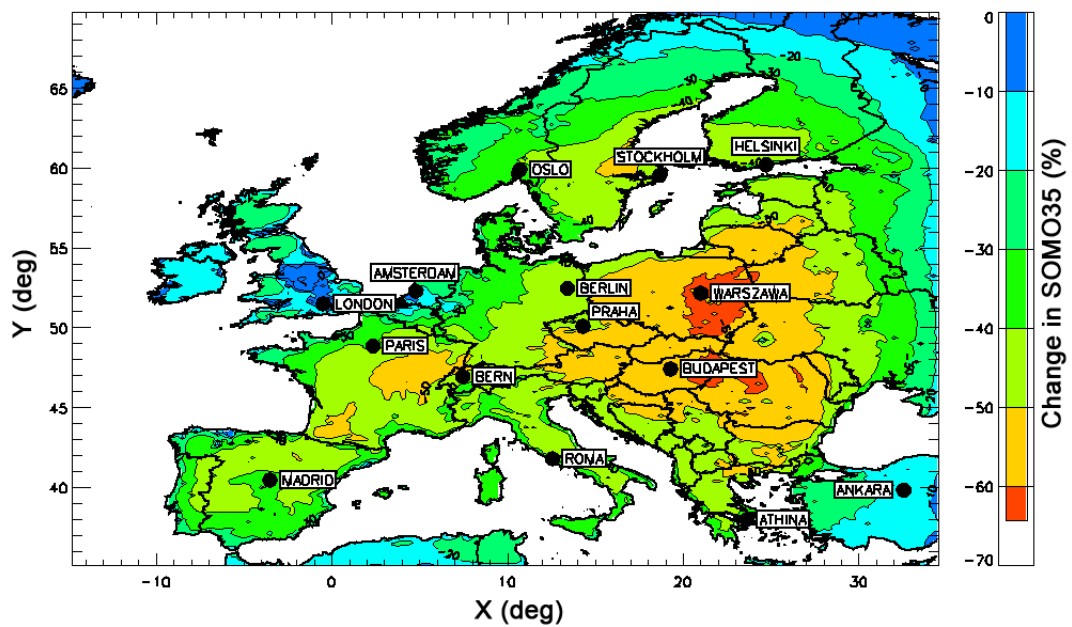
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 3 Figure S4: Relative changes in AOT40 over the Swiss domain, BL 2020 - 2005 (upper
 4 panel) and MTFR 2020- 2005 (lower panel).

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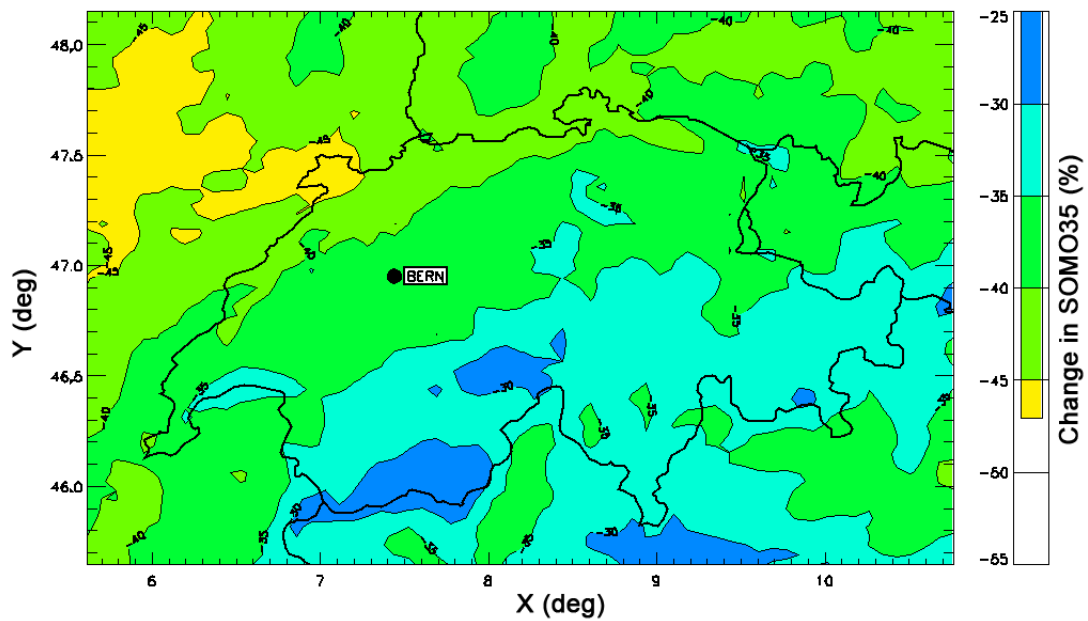


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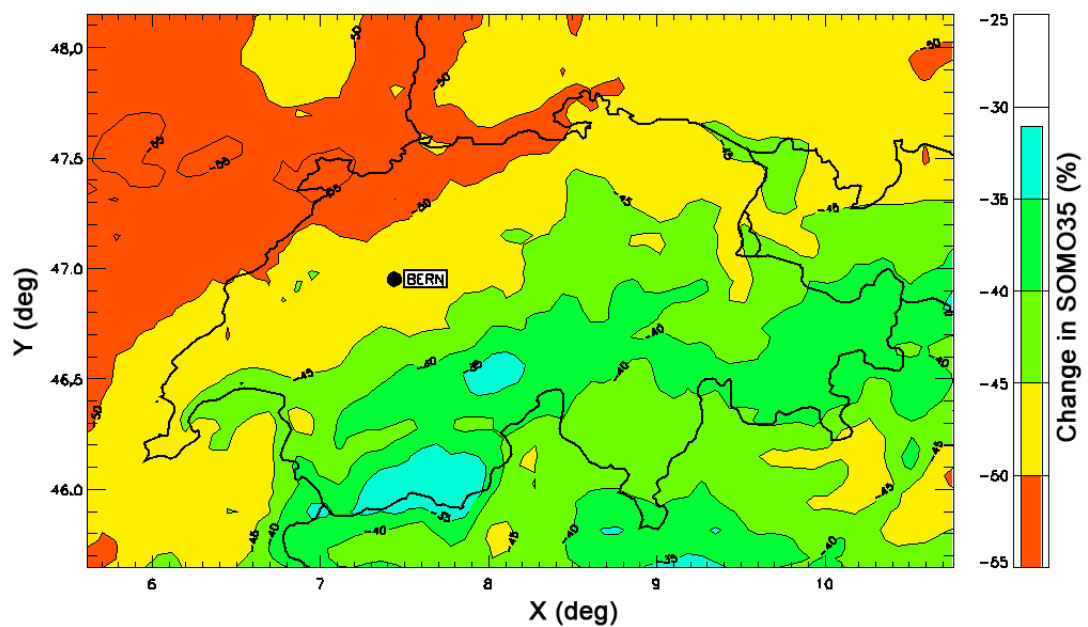
3 Figure S5: Relative changes in SOMO35 over the European domain for two scenarios:
 4 BL 2020- 2005 (upper panel) and MTR 2020 – 2005 (lower panel).

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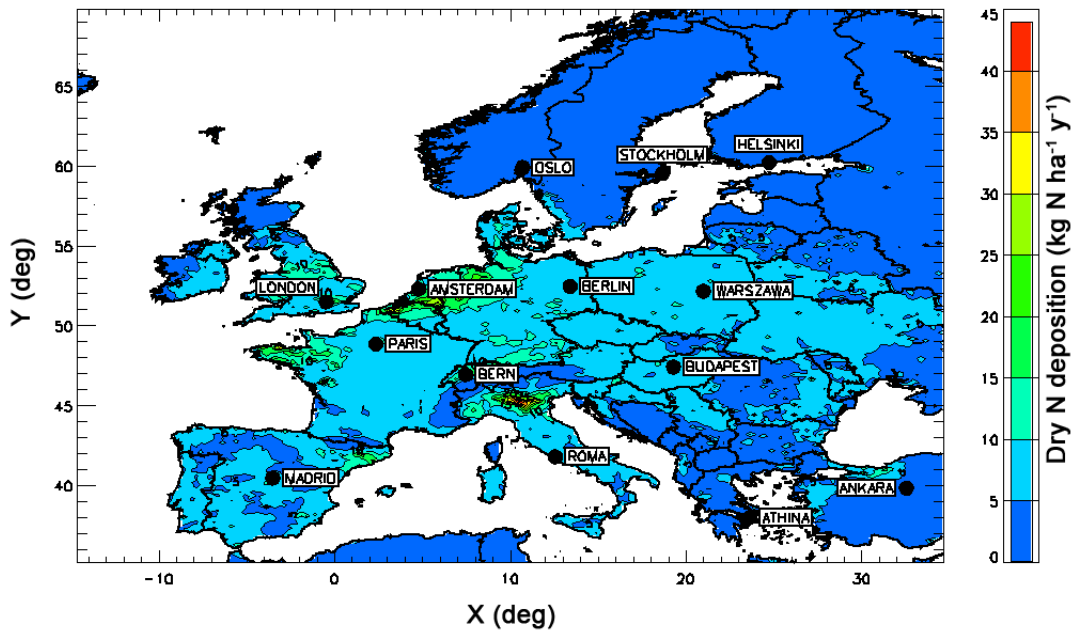


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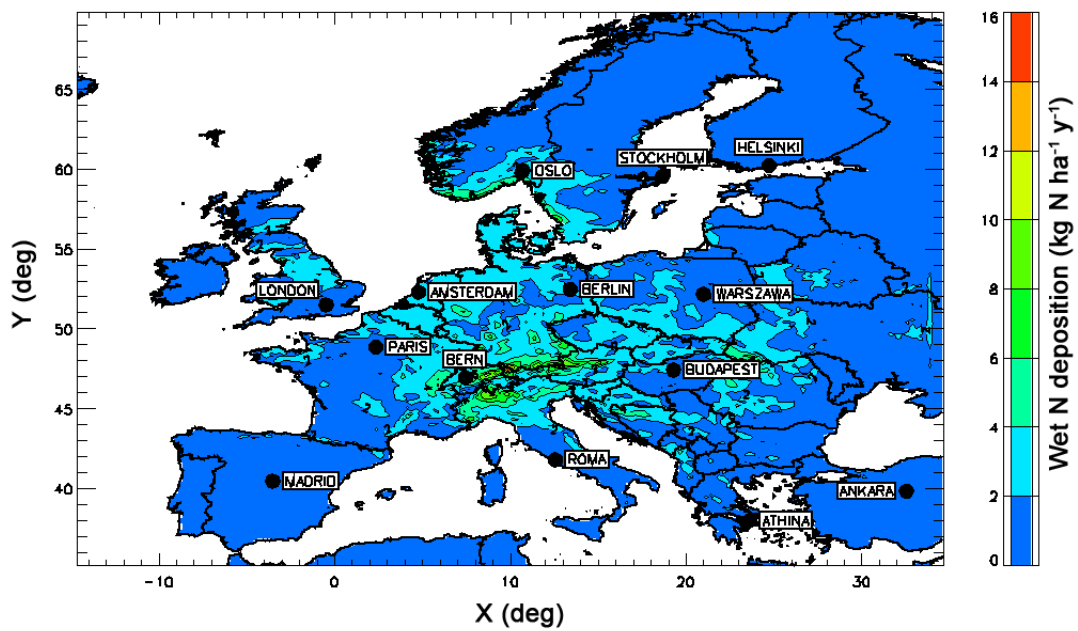
3 Figure S6: Relative changes in SOMO35 over the Swiss domain for two scenarios: BL
 4 2020- 2005 (upper panel) and MTRF 2020 – 2005 (lower panel).

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 3 Figure S7: Dry (upper panel) and wet (lower panel) nitrogen deposition ($\text{kg N ha}^{-1} \text{y}^{-1}$)
 4 over the European domain (2006).

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