

Supplementary Information

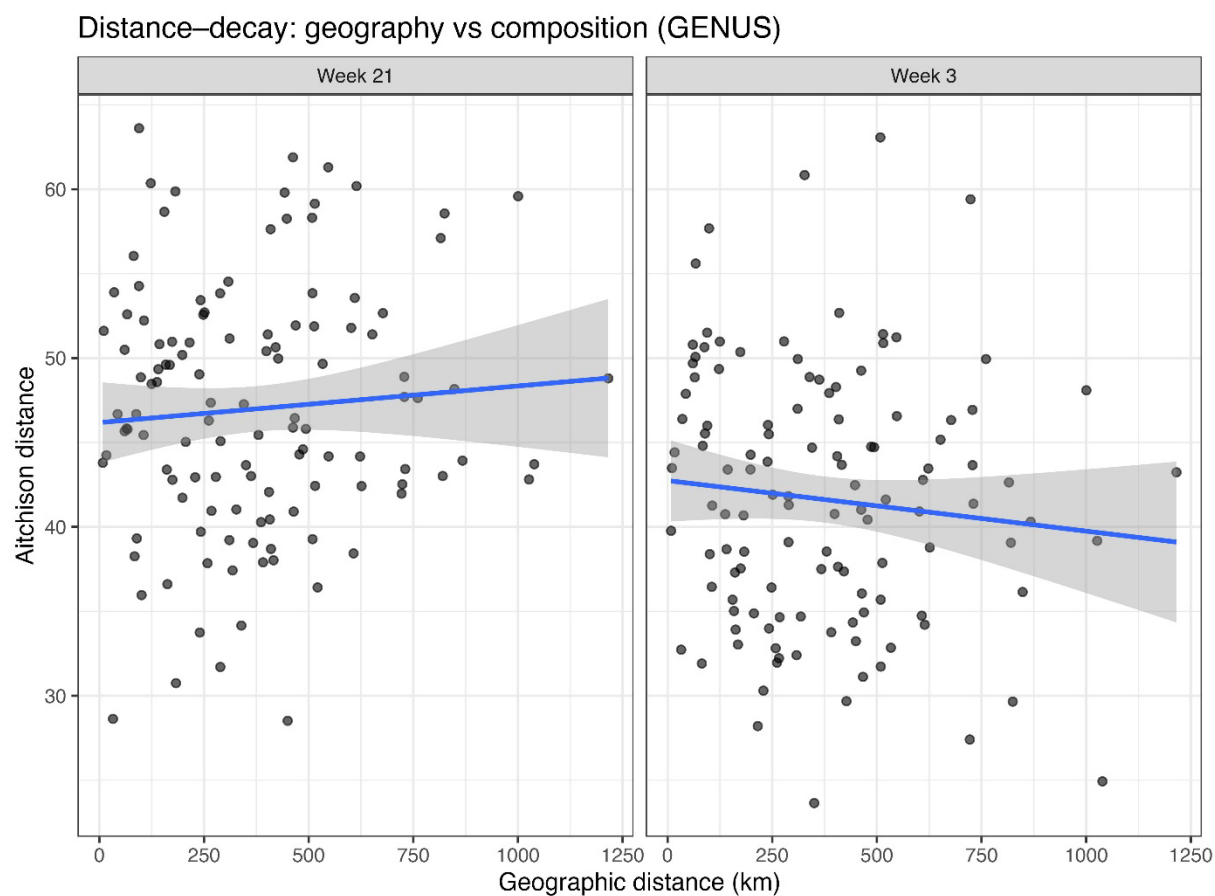
for the article: Stable cores and dynamic peripheries: spatial structuring dominates over temporal turnover in wastewater microbiomes across 16 Swedish cities. Mukhedkar D, et al.

Note: This file contains Supplementary Figures S1–S2 and Supplementary Table S1 associated with the main text. Supplementary Tables S2–S4 are provided as separate additional files in CSV format due to their large size.

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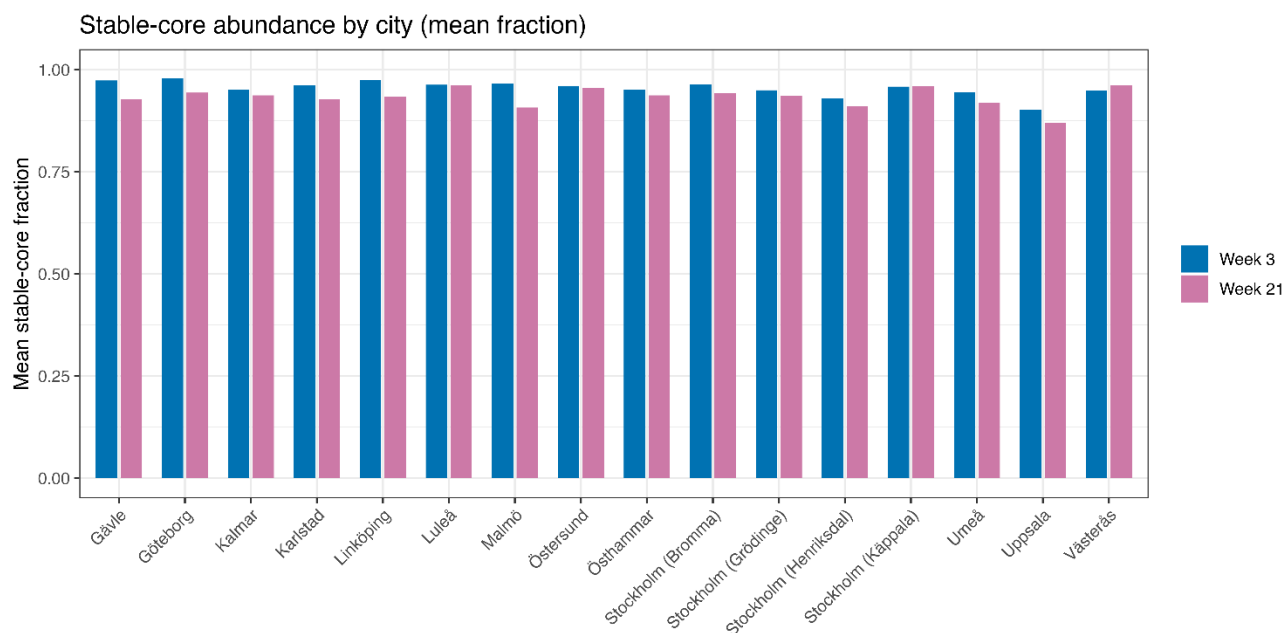
- Supplementary Figure S1 – Geographic distance–decay p. 2
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Supplementary Figure S1: Geographic distance–decay of wastewater microbiomes at two timepoints.



Scatterplots showing the relationship between geographic distance (x-axis) and Aitchison distance (y-axis) among wastewater treatment plants across Sweden at Week 3 (right) and Week 21 (left). Each point represents a pairwise comparison between sites. Shaded areas indicate 95% confidence intervals from linear regression.

Supplementary Figure S2: Stable-core abundance by city.



Mean fraction of total abundance explained by the stable core at Week 3 and Week 21 for each city.

Supplementary Table S1: Decomposition of temporal turnover (Week 3 vs. Week 21) into stable-core versus peripheral contributions for each city.

City	Turnover (W21 vs W3, Aitchison)	Stable-core turnover	Peripheral turnover	Stable-core share (%)	Peripheral share (%)
Kalmar	52.3	19.8	48.4	14.3	85.7
Gävle	48.7	10.5	47.6	4.7	95.3
Stockholm (Henriksdal)	48.1	12.3	46.5	6.6	93.4
Uppsala	46.4	14.8	44	10.1	89.9
Östersund	45.4	14.8	42.9	10.7	89.3
Luleå	45.2	17.3	41.7	14.7	85.3
Göteborg	41	11	39.5	7.2	92.8
Stockholm (Grödinge)	38.2	11.2	36.5	8.6	91.4
Umeå	36.9	16.9	32.8	21	79
Östhammar	35.7	11.3	33.9	10	90
Västerås	35	10.8	33.3	9.6	90.4
Linköping	34.9	7.7	34	4.8	95.2
Stockholm (Käppala)	34.6	13.8	31.7	15.9	84.1
Malmö	34.2	12.5	31.8	13.5	86.5
Karlstad	32.7	11.2	30.8	11.7	88.3
Stockholm (Bromma)	31.6	4.8	31.2	2.3	97.7