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| **Appendix C.** Generalized linear mixed models (GLMMs) for among-site variation in bird density (unit), biomass, species number and Shannon diversity index at four smelter sites. n = number of counting points. |
| Area | n | Fdf | p |
| **Harjavalta (14 sites)** |  |  |  |
| Total densitya | 28 | 1.6313,14 | 0.19 |
| Log biomassb | 28 | 1.0613,14 | 0.46 |
| N of speciesa | 28 | 0.7813,14 | 0.67 |
| Shannon indexb | 28 | 2.7613,14 | 0.035 |
| **Karabash (10 sites)** |  |  |  |
| Total densitya | 40 | 32.89,30 | <0.0001 |
| Log biomassb | 40 | 8.209,30 | <0.0001 |
| N of speciesa | 40 | 8.159,30 | <0.0001 |
| Shannon indexb | 40 | 42.39,30 | <0.0001 |
| **Monchegorsk (10 sites)** |  |  |  |
| Total densitya | 40 | 19.89,30 | <0.0001 |
| Log biomassb | 40 | 4.169,30 | 0.0015 |
| N of speciesa | 40 | 5.179,30 | 0.0003 |
| Shannon indexb | 40 | 41.29,30 | <0.0001 |
| **Revda (10 sites)** |  |  |  |
| Total densitya | 40 | 11.89,30 | <0.0001 |
| Log biomassb | 40 | 9.829,30 | <0.0001 |
| N of speciesa | 40 | 1.729,30 | 0.13 |
| Shannon indexb | 40 | 5.269,30 | 0.0003 |
| a GLMM with log link function and negative binomial error distribution. Study site was used as a random factor.b GLMM with identity link function and normal error distribution. Study site was used as a random factor. |