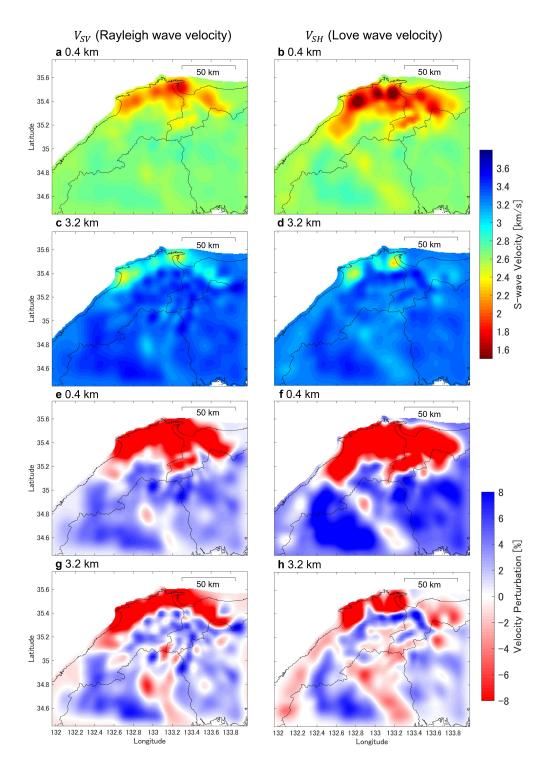
## Additional file of Suemoto et al., (2020)

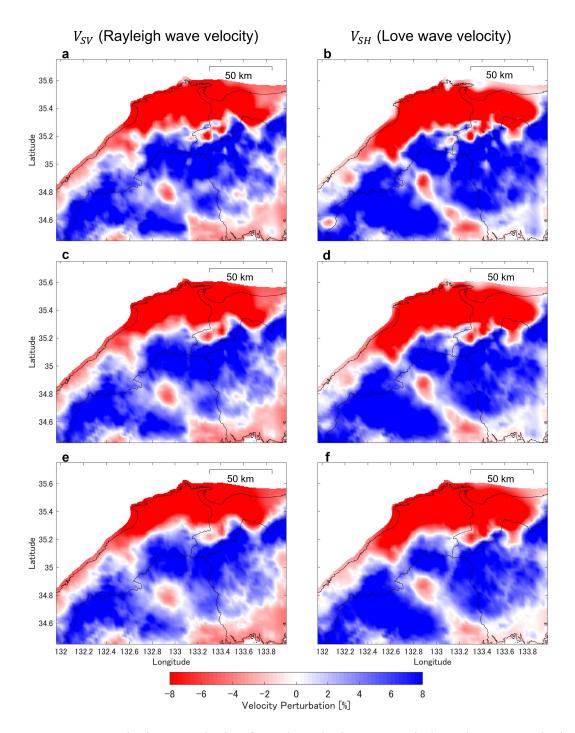
Figure S1: S-wave velocity structure without correction for topography

Figure S2: S-wave velocity perturbation with different smoothing parameters

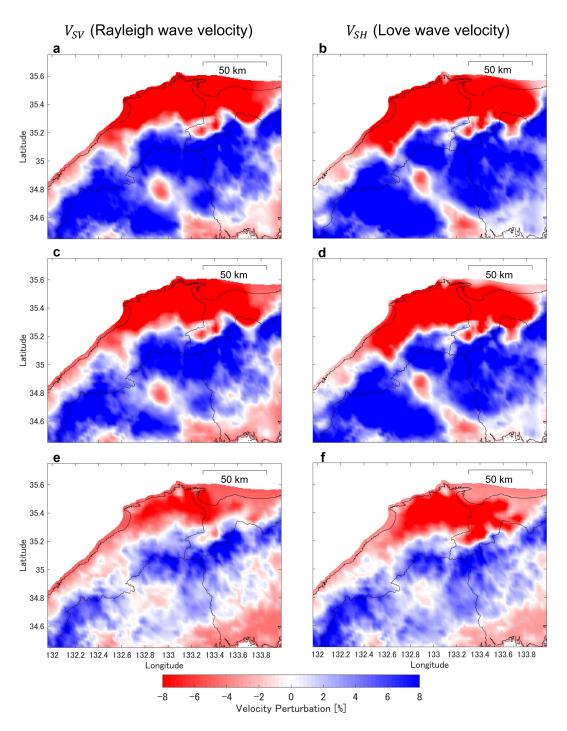
Figure S3: S-wave velocity perturbation with different damping parameters



**Fig. S1** Absolute S-wave velocity values and their perturbation from the velocity average in lateral S-wave velocity slices at 0.4 km and 3.2 km depth from the surface (without correction for topography). **a**, **c**, **e** and **g** Rayleigh wave results; **b**, **d**, **f**, and **h** Love wave results. In each panel, black lines show prefecture borders, and the depth is shown above the upper left corner



**Fig. S2** S-wave velocity perturbation from the velocity average in lateral S-wave velocity slices at 0.5 km depth for different smoothing parameter strengths. **a**, **b** Half-strength smoothing parameters, relative to the results shown in Fig. 6. **c**, **d** Same strength. **e**, **f** Twofold strength



**Fig. S3** S-wave velocity perturbation from the velocity average in lateral S-wave velocity slices at 0.5 km depth for different damping parameter strengths. **a**, **b** One-tenth strength, relative to the results shown in Fig. 6. **c**, **d** Same strength. **e**, **f** Tenfold strength