Supplementary material of:

Testing the 2020 European Seismic Hazard Model (ESHM20) against observations from Romania

Elena F. Manea[1,2], Laurentiu Danciu[3], Carmen O. Cioflan[1], Dragos Toma-Danila[1], Matt Gerstenberger[2]

[1]National Institute for Earth Physics, Măgurele, 077125, Ilfov, Romania
[2] GNS Science, PO Box 30-368, Lower Hutt, New Zealand
[3] ETH Zurich, Seismology and Geodynamics, Sonneggstrasse 5,8092 Zurich, Switzerland

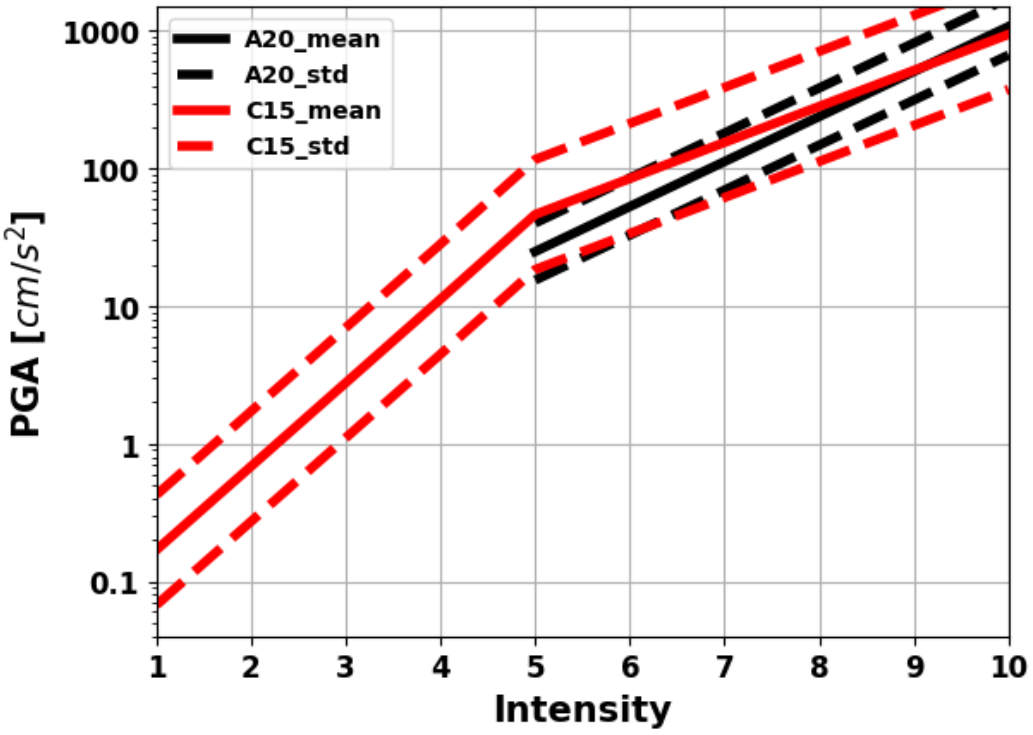

Figure S1. The distribution of the MSK-64 Intensity to PGA conversions for the two selected equations (Ardeleanu et al., 2020 – A20 and Caprio et al., 2015 – C15) and their corresponding standard deviations.

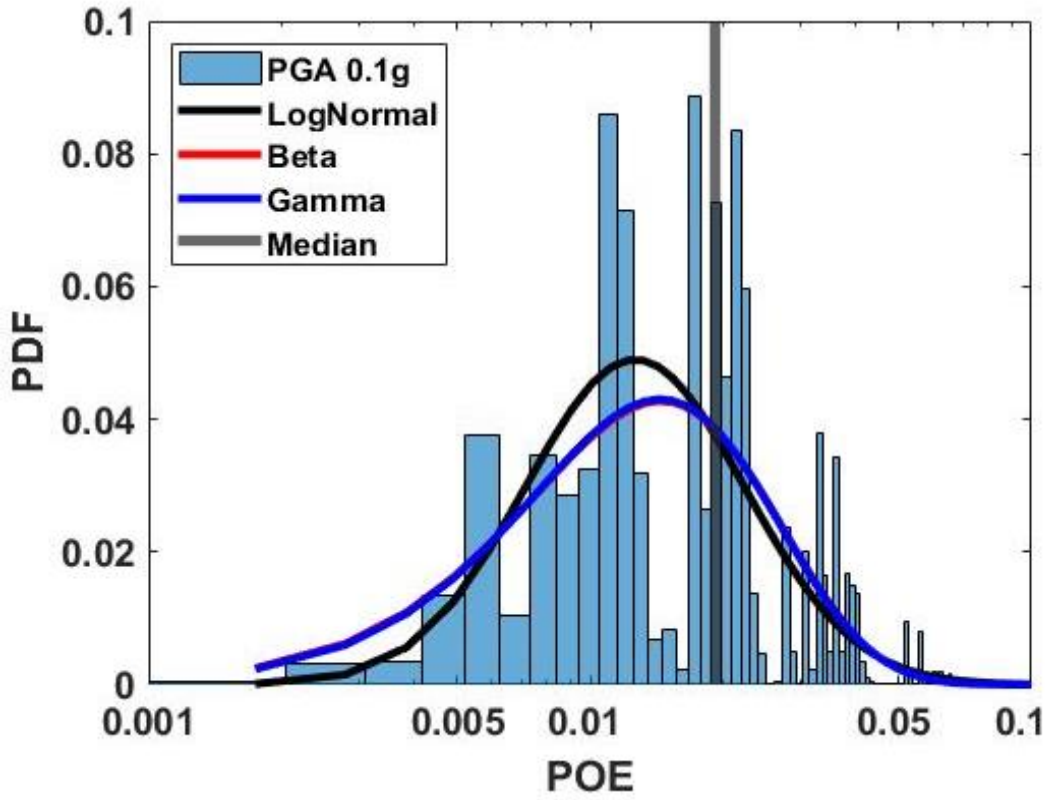

Figure S2. Distribution of the annual probability of exceedance (POE) at 0.1g PGA extracted from the ESHM20 for Bucharest. The vertical dark line represents the mean value from hazard curves, while the black, blue and red are the fitted Lognormal, Beta and Gamma distributions. Note that the Beta and Gamma distribution overlap.

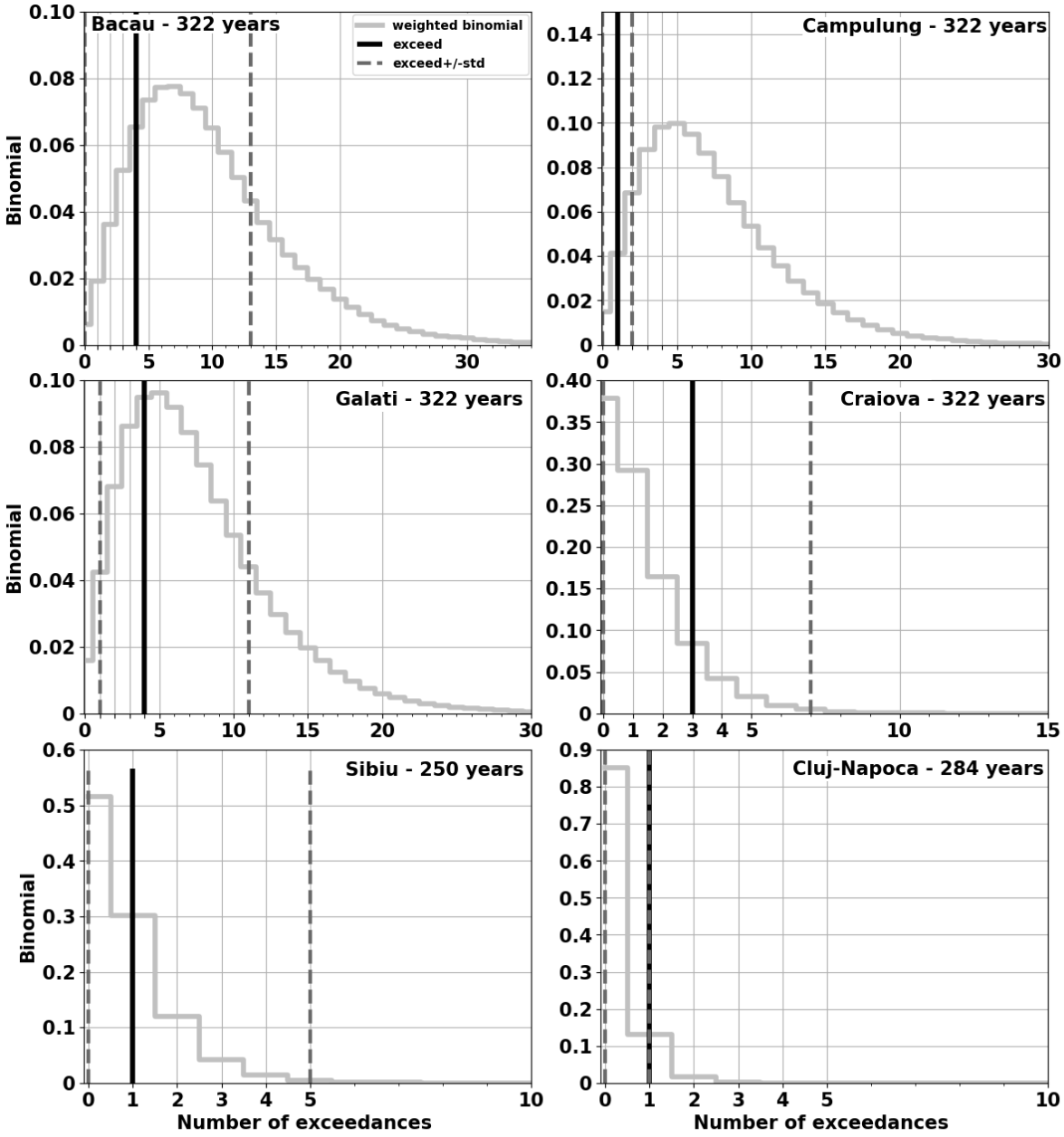

Figure S3. Consistency test results of ESHM20 with the observed PGA values at 0.1 g for Romanian cities. Where: ESHM weighted mean predicted - histogram, the observed number of exceedances - black line and its one sigma variability - dashed vertical lines; the total completeness time is specified in each subplot for their respective city.

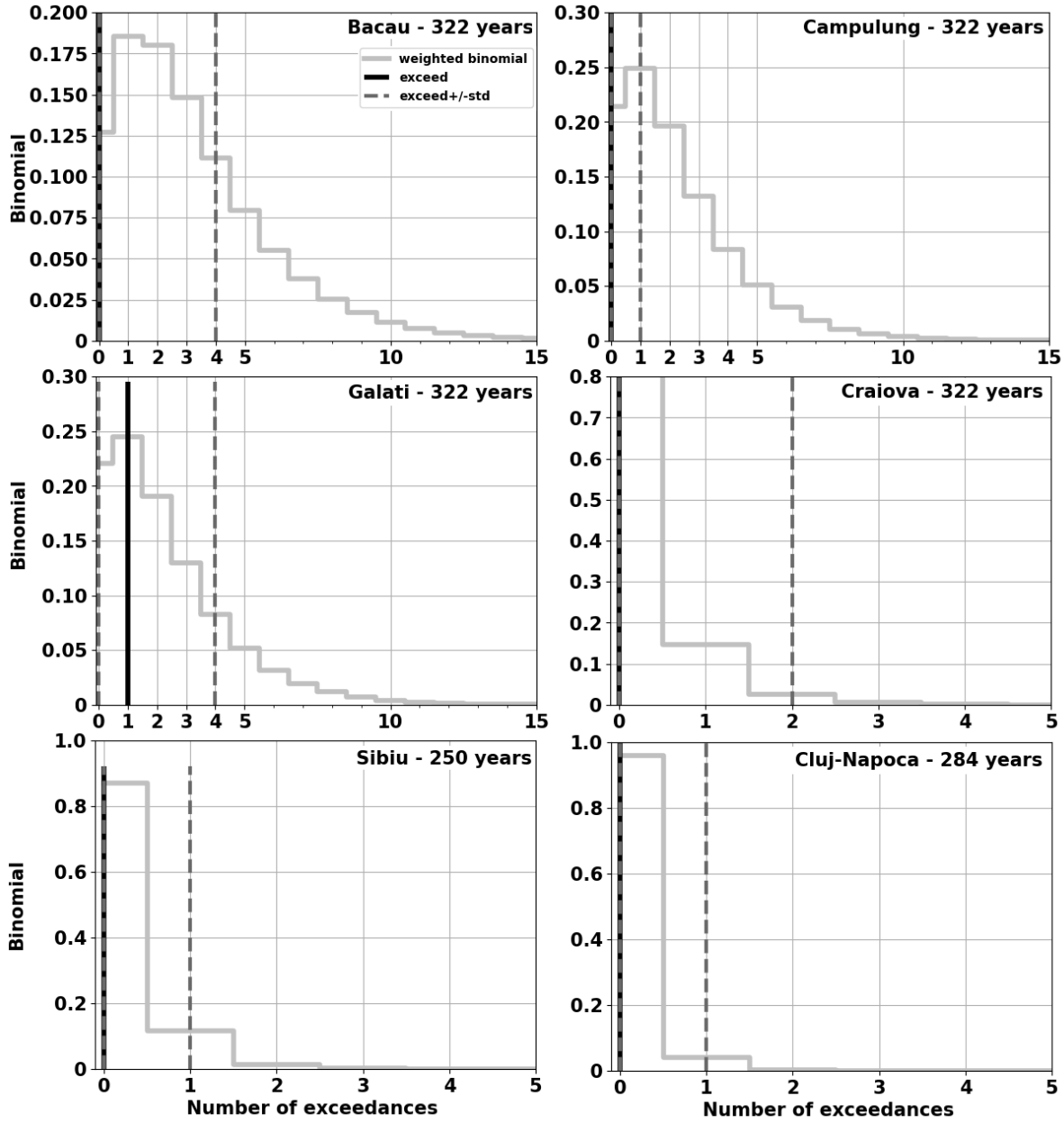

Figure S4. Consistency test results of ESHM20 with the observed PGA values at 0.2 g for Romanian cities. Where: ESHM weighted mean predicted - histogram, the observed number of exceedances - black line and its one sigma variability - dashed vertical lines; the total completeness time is specified in each subplot for their respective city.

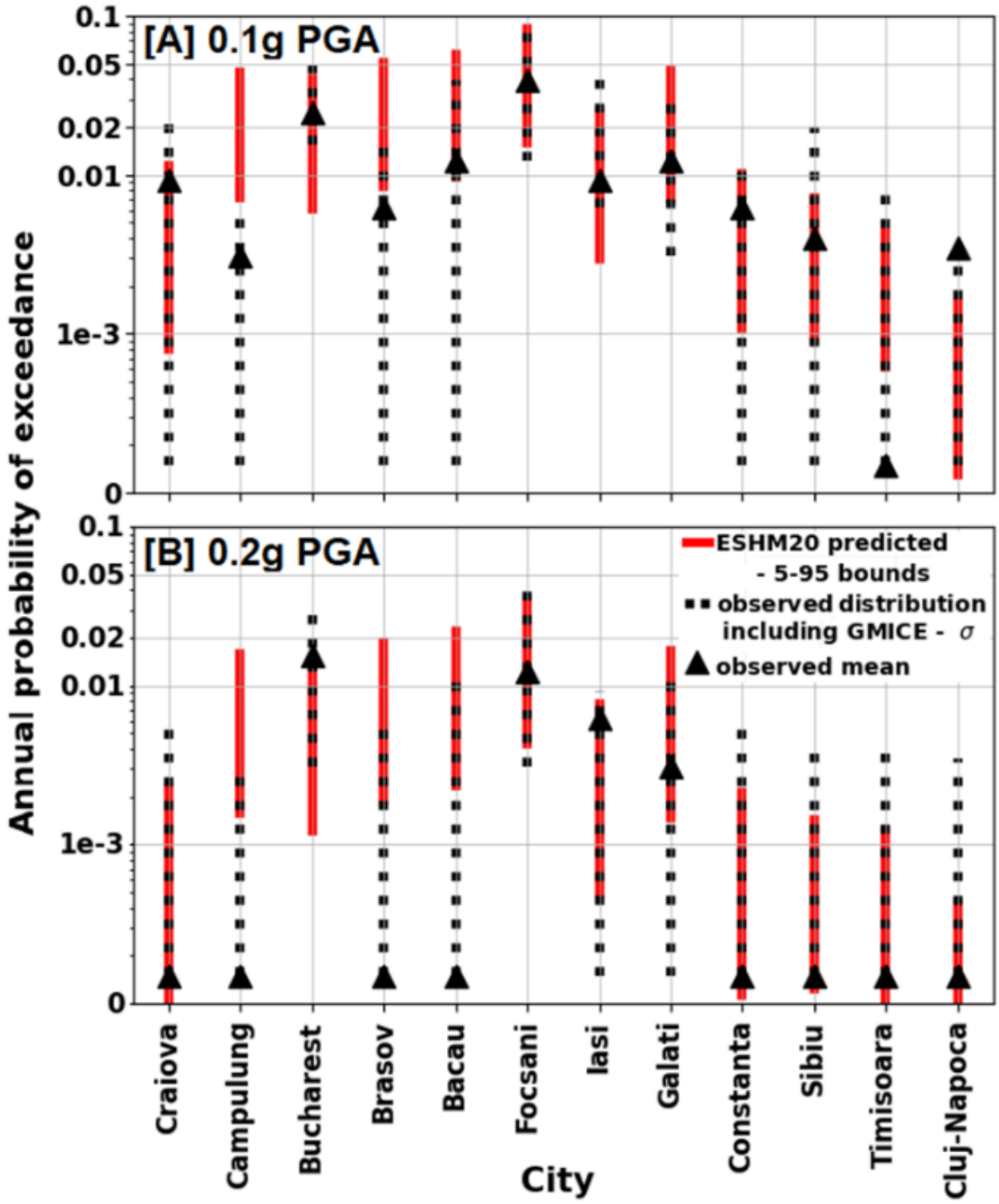

Figure S5. Comparison between the recorded and ESHM20 annual probability of exceedance at [A] 0.1 and [B] 0.2 g for each of the twelve Romanian cities.