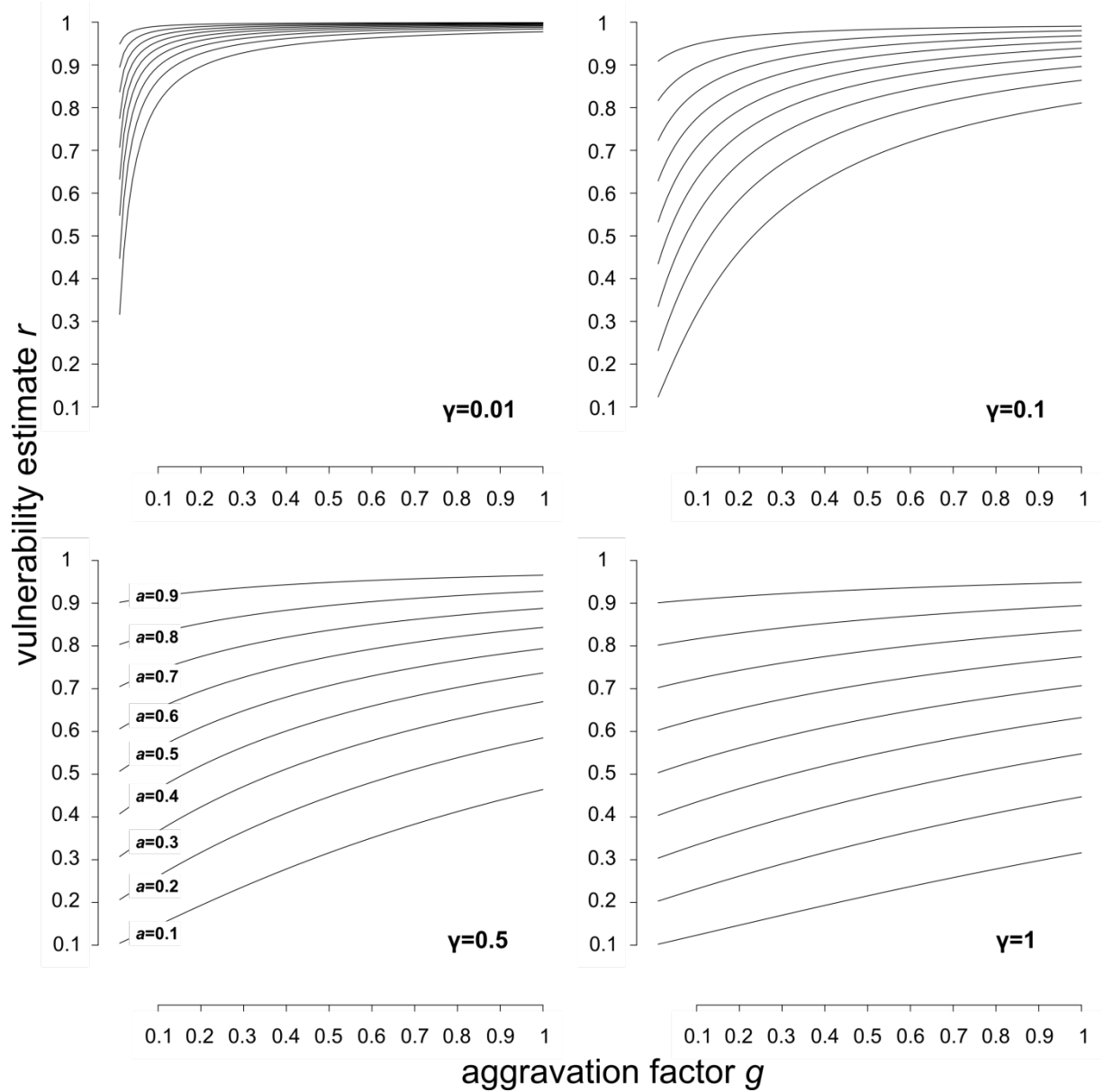


APPENDIX 1 – The vulnerability function

Behaviour of the proposed vulnerability function (Eq. 3 in the main manuscript), showing the effect of the primary factor (a , different curves), of the aggravation factor (g , x-axis), and the effect of the influence parameter (γ , different panels) on the vulnerability estimate (r , y-axis). Note that $r = a$ when $g = 0$.



Our recommendation concerning the choice of γ value is to use a default of 0.5 as we did in our study, or at least to stay within limits comprised between 0.1 and 1. Indeed, within this range, the value of γ has a very limited effect on the assessment, as it can be seen in the succession of maps presented in appendix S2b, where we did the assessment for the ROMER dataset with γ varying between 0.1 and 1. Such a sensitivity analysis is furthermore informative as it shows how our perception of the importance of the aggravation factors can affect the assessment. Using values above 1 will never have a strong effect, it will just give a very low weight to the aggravation factors.