



## Response to Comment on "Plant Species Richness and Ecosystem Multifunctionality in Global Drylands"

Fernando T. Maestre *et al.*  
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and the corresponding abiotic measure) (10). If the inclusion of these interaction terms modifies the regression coefficients of other predictors, or substantially increases the variance explained by the model, it would imply that the B-EMf relationship changes along environmental gradients. We ran two new sets of models with our multifunctionality index as the dependent variable and compared them with our original set of models (Fig. 2A). Model set A included the original variables, plus four interaction terms between plant species richness and the four principal components of the PCA analysis (PCA components describing major climatic variables).

Regardless of the combination of variables chosen, our results were robust and virtually identical to those presented in our original analyses (Fig. 2). The inclusion of interaction terms did not modify the regression coefficients of other predictors. Annual mean temperature, species richness, slope, and elevation. The interaction terms were always weaker than the original variables, and they collectively increased the variance explained by less than 0.5%. In both model sets, one of the richness by abiotic inter-

action terms were chosen in the best model. However, the addition of these interaction terms

the new interaction

terms were always weaker than the original

scatter found in our results (1). We also believe that the amount of variance in the B-EMf relationship not explained by the variables we measured clearly deserves further attention (12). However, the main take-home message of both our original manuscript and this response is that, despite the multiple sources of variation, there is a significant positive B-EMf relationship in global drylands and that species richness is an important positive predictor of ecosystem multifunctionality. The latter result was consistent after accounting for other major environmental factors and their interactions with plant species richness.

#### References and Notes

1. [M. J. A. Werger et al., Science 335, 214 \(2012\).](#)
2. [M. J. A. Werger et al., Science 337, 155 \(2012\);](#)
3. [M. J. A. Werger et al., Ecology of Desert Systems \(A. J. Elmer, Ed., Springer, 2012\), p. 155.](#)

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5. [M. J. A. Werger, World Atlas of Desertification \(A. J. Elmer, Ed., Springer, 1992\).](#)
6. [M. J. A. Werger et al., Ecology of Desert Systems \(A. J. Elmer, Ed., Springer, 2012\), p. 155.](#)