



Response to Comment on "Plant Species Richness and Ecosystem Multifunctionality in Global Drylands" Fernando T. Maestre *et al. Science* **337**, 155 (2012); DOI: 10.1126/science.1220620

This copy is for your personal, non-commercial use only.

If you wish to distribute this article to others, you can order high-quality copies for your colleagues, clients, or customers by clicking here.

Permission to republish or repurpose articles or portions of articles can be obtained by following the guidelines here.

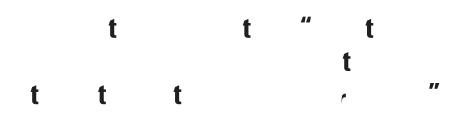
The following resources related to this article are available online at www.sciencemag.org (this information is current as of July 12, 2012):

Updated information and services, including high-resolution figures, can be found in the online version of this article at: http://www.sciencemag.org/content/337/6091/155.4.full.html

A list of selected additional articles on the Science Web sites **related to this article** can be found at: http://www.sciencemag.org/content/337/6091/155.4.full.html#related

This article cites 7 articles, 3 of which can be accessed free: http://www.sciencemag.org/content/337/6091/155.4.full.html#ref-list-1

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published weekly, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. Copyright 2012 by the American Association for the Advancement of Science; all rights reserved. The title *Science* is a registered trademark of AAAS.



Fernando T. Maestre,¹* Santiago Soliveres,¹

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 variaction terms were chosen in the best model. able and compared them with our original set However, the addition of these interactions terms of models (Fig. 2A). Model set A included the original variables, plus four interaction terms between plant species richn[(of)-28d18.8(i)-512spi four principal compon[(of)-2-081tts ysis (PCA) compo[(of)-nents describin major climatic fe[(o)][at)17.6(ur)18.8(es)-20(of)-20(ou)19.8(r)]TJ0-1.1697TD[(st)16.2(u)1(aty)-290.1(st)22.5(t)-0.1(e)17.7(s)-298(()]TJT1117 Regardless of the combination of variables chosen, our results were robust and virtually identical to those presented in our original analysesFig. 2). The inclusion of the new interaction terms did modify the regression coeficients of other predictors. Annual mean tei6.5(mp)6.2(er)5.(atur)5.(a)-278.1(a)6.5(nd)]TJ-0.027Tc0-1.162TD[(sai)-.4(n)-5.6(d)-441.9(co)-5.6(t)-444.2(w)-2.6(ei)-.4(t)-2.6(ei)-.4(species richness, slope, and elevation. The inter action terms were always weaker than theoriginal variables, and they collectively increased the variance explained by less than 0.5%. In both

warrance explained by less than 0.5%. In both model sets, one of the richness by abiotic inteir-

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	et al., Science 335, 214 (2012).	
2 ,	. A. , Science 337, 155 (2012);	
3	<pre>f, /, /, /, #337/6091/155-, f, Ecology of Desert Systems (A,</pre>	,