

Interactive comment on “Typhoons exert significant but differential impact on net carbon ecosystem exchange of subtropical mangrove ecosystems in China” by H. Chen et al.

Anonymous Referee #3

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The submission by H. Chen et al. entitled, Typhoons exert significant but differential impact on net carbon ecosystem exchange of subtropical mangrove ecosystems in China, is appropriate for publication in Biogeosciences once minor changes below are addressed. Their paper is of interest to several groups including mangrove ecologists, ecologists studying ecosystem response to disturbance, and to interdisciplinary groups studying coastal carbon cycling.

General comment Adding an additional figure or table presenting monthly and/or annual NEE, GEP, and RE for the two mangrove forest sites would improve the quality and broader interest in the paper. Such results will provide some context regarding the importance of these forests for carbon cycling and of the productivity of these forests

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relative to mangrove forests elsewhere.

Comments p.9423 l.3-4 – Change text to, “. . .in China have been greatly lost since the 1980s with only 22700 ha remaining. . .” l.6 – Change text to something like, “. . .of tropical cyclones are likely to change in . . .” l.12 – Change “ecology” to “ecological”. l.23 – Change “ecosystem” to “ecosystems”.

p.9425 l.24 – Change text to, “. . .has been included in the Ramsar List. . .” p.9426 l.26 – Change “tripping” to “tipping”. p.9430 l.12 – Are these units in g of dry biomass? Specify here. p.9431 l.26 – Change “litter” to “little”. p.9432 l.8 – Why did strong winds result in lower daily RE? What is the mechanism (or mechanisms)? The statements that follow (p.9433 l.1,2) seem to contradict this result by suggesting that wind results in litter production and increased RE following typhoons. Are there other processes that may have contributed to reduced RE following disturbance? For instance, could lowered leaf area index following high winds contribute to lower dark respiration of foliage (and therefore lower RE)?

p.9434 l.25 – Change text to “They interact with each other, . . .” p.9435 l.1 – Change “ecosystem” to “ecosystems”. l.4 – Should read, “Hurricane disturbance has. . .” l.7 – Change “who” to “which”. l.9-10 – Reword sentence to begin something like, “However, a significant increase in NEE was observed at our study site. . .” l.15 – Change “typhoon” to “typhoons”.

Table 2 – Could p-values be added to this table to indicate significant differences in parameters comparing before and after disturbance?

Figure 5 – The figure caption should provide some details regarding how NEE residuals were computed. Or, refer the reader to the methods section.

Interactive comment on Biogeosciences Discuss., 11, 9421, 2014.