

Reply for Anonymous Referee #1:

Thank you for the positive appreciation of our work. We will make the following changes to the suggestions:

1. I have noticed only a few editorial corrections that need to be made, such as on pg. 25, the word "to" was left out "Compared the widely used MOD16 ET data..."

Reply: "Compared the widely used MOD16 ET data ..." (Line 543, Page 25) will change to "Compared to the widely used MOD16 ET data ...". Moreover, we will further to check the editorial mistakes in the whole manuscript as well.

2. I would like to see them address in the text. Figure 11d shows SEBAL as a bi-modal curve whereas the summary histogram (Sebal in red) shape shows a low and wider distribution than MOD16 (blue). I'm wondering why SEBAL data is in fact bi-modal and the reasons for this need to be discussed. This is the only minor change I have other than to read it carefully for editorial mistakes.

Reply: According to your suggestion, the following paragraph will add to discuss the question (Section 3.4, Page 18, Lines 340 - 346):

“Regarding the distribution of ET_{SEBAL} , a bi-modal curve with the boundary of ~500mm was shown in the Fig. 11d, it was likely contributed by the misestimation of part of regions. The ET_{SEBAL} map was divided to two parts with 500 mm as threshold (Fig. 11f, g), the part of ET_{SEBAL} below 500 mm was distributed in the Northwest China whereas the part of ET_{SEBAL} over 500 mm was distributed in the southeast. It should be noted that the vegetation cover in northwest of China are mainly grassland and a small part of cropland (Fig. 11h), and SEBAL was underestimated the ET of grassland and cropland (Section 3.1). In contrast, ET_{SEBAL} showed slightly overestimation of forest which is the main land cover types in southeast of China. Therefore, the part which ET should have been distributed around ~500 mm was underestimated or overestimated, and thus caused the bi-modal curve.”

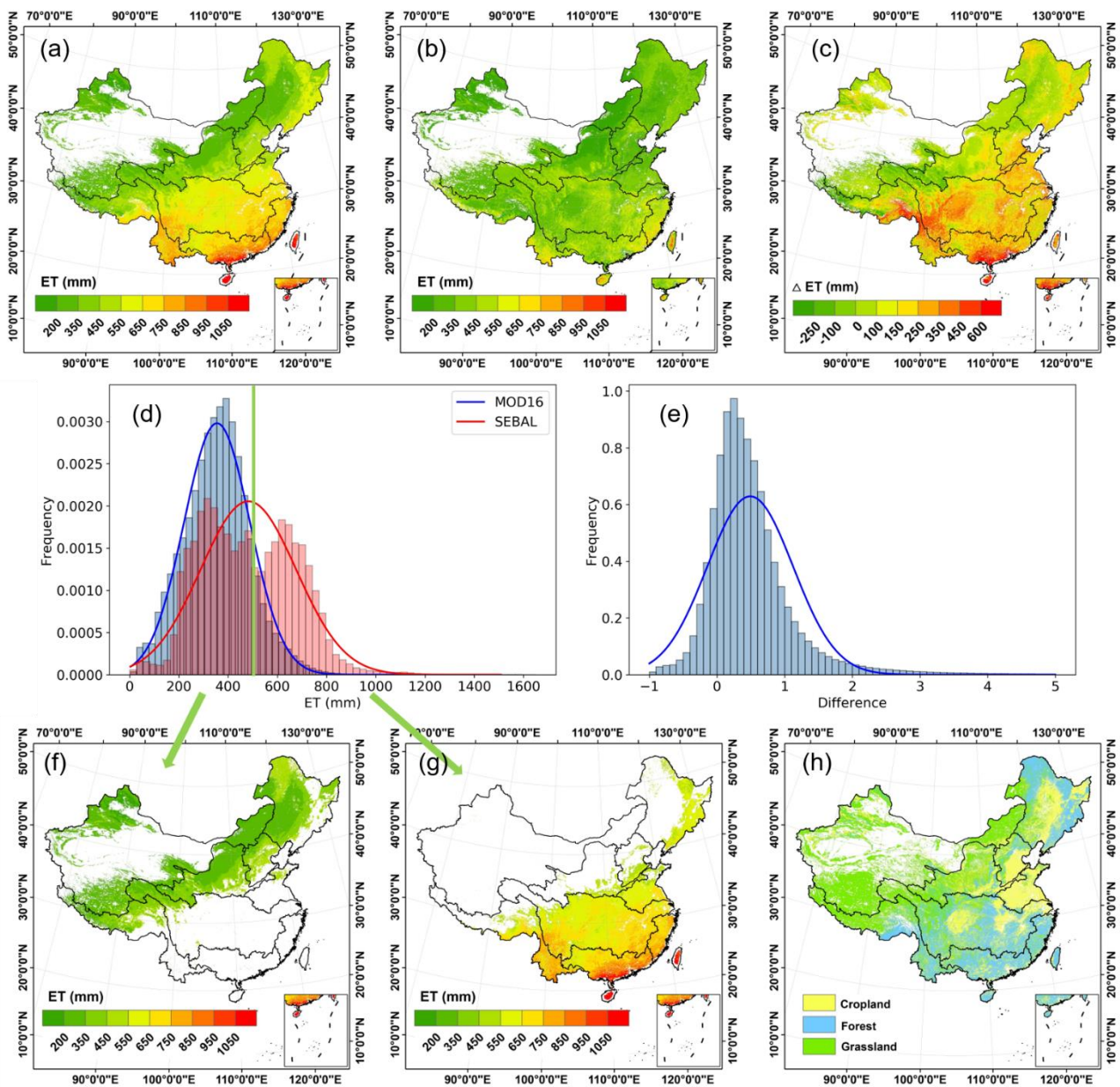


Figure 11. A comparison between the SEBAL and MOD16 models. (a) Distribution of annual average ET_{SEBAL} ; (b) Distribution of annual average ET_{MOD} ; (c) Distribution of the difference between SEBAL and MOD16 ($ET_{SEBAL} - ET_{MOD}$); (d) Histogram of annual average ET_{SEBAL} and ET_{MOD} ; (e) Histogram of the relative difference between SEBAL and MOD16 ($(ET_{SEBAL} - ET_{MOD})/ET_{MOD}$); (f) Map of ET_{SEBAL} over 500 mm; (g) Map of ET_{SEBAL} below 500 mm; (h) Land cover in China.