Hydrology and
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Supplement of

Assessing recovery time of ecosystems in China: insights into flash drought impacts on gross primary productivity

Mengge Lu et al.

Correspondence to: Huaiwei Sun (hsun@hust.edu.cn)

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Figure S1 S2 S3 S4 S5

S1. Introduction

This document provides Supplementary materials for the main *Hydrology and Earth System Sciences* paper. This information consists of three supplementary figures which provide further information.

Section S2

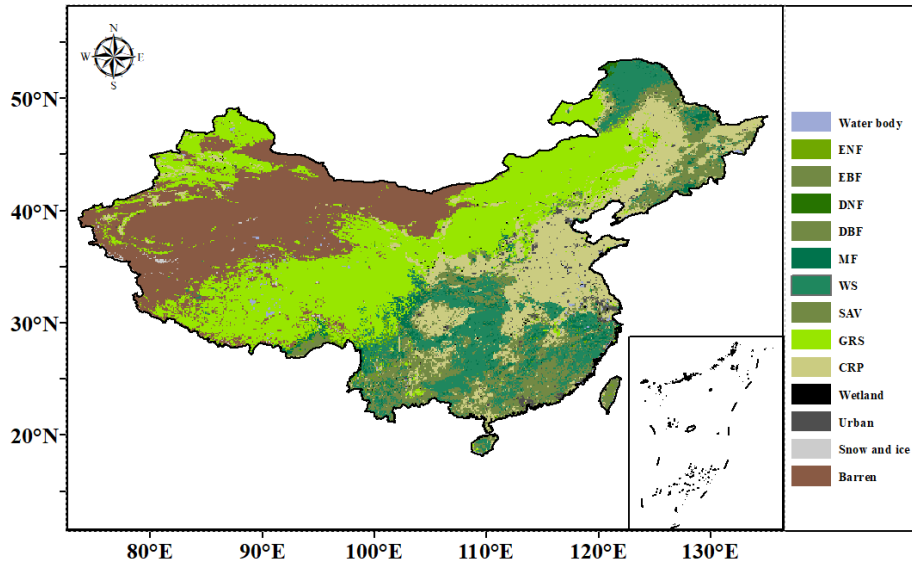Figure. S1 shows the definition of land cover classes based on IGBP land classes.

Figure S2 shows the location of the middle and lower reaches of the Yangtze River.

Figure S3 shows the mean values of soil moisture (SM) and GPP anomaly between -4 pentads and +9 pentads after flash drought onset.

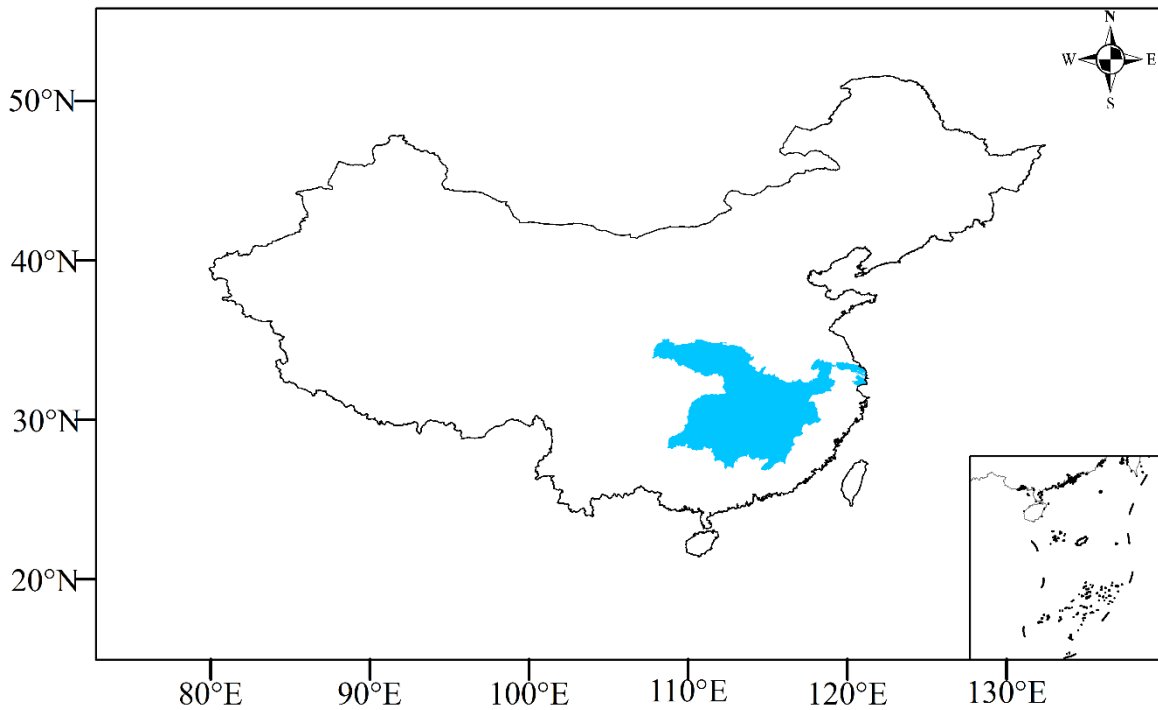Figure S4 shows the recovery time to original state at 80%(a), 90%(b), 100%(c), and 110%(d) recovery thresholds.

Figure. S5 shows the patten of aridity index and pentad net radiation.

Figure. S1. Definition of land cover classes based on IGBP land classes. ENF, evergreen needleleaf forests; EBF, evergreen broadleaf forests; DF, deciduous forests; MF, mixed forests; WS, closed shrubland, open shrubland and woody savannas; SAV, savannas (temperate); GRS, grasslands; CRP, croplands; CRO, croplands and natural vegetation mosaic; Barren, barren sparsely vegetation.
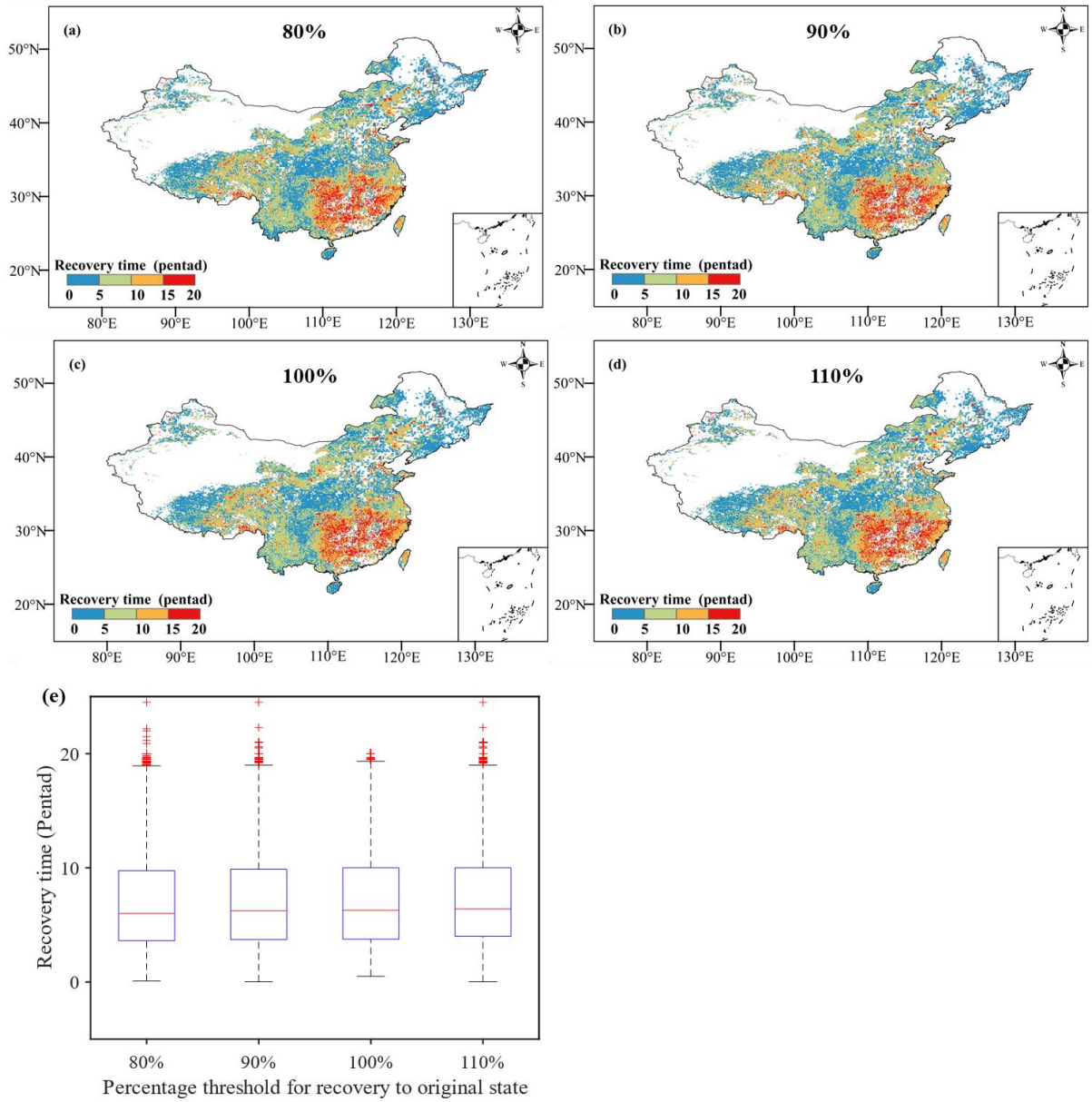

Figure. S2. Location of the middle and lower reaches of the Yangtze River.
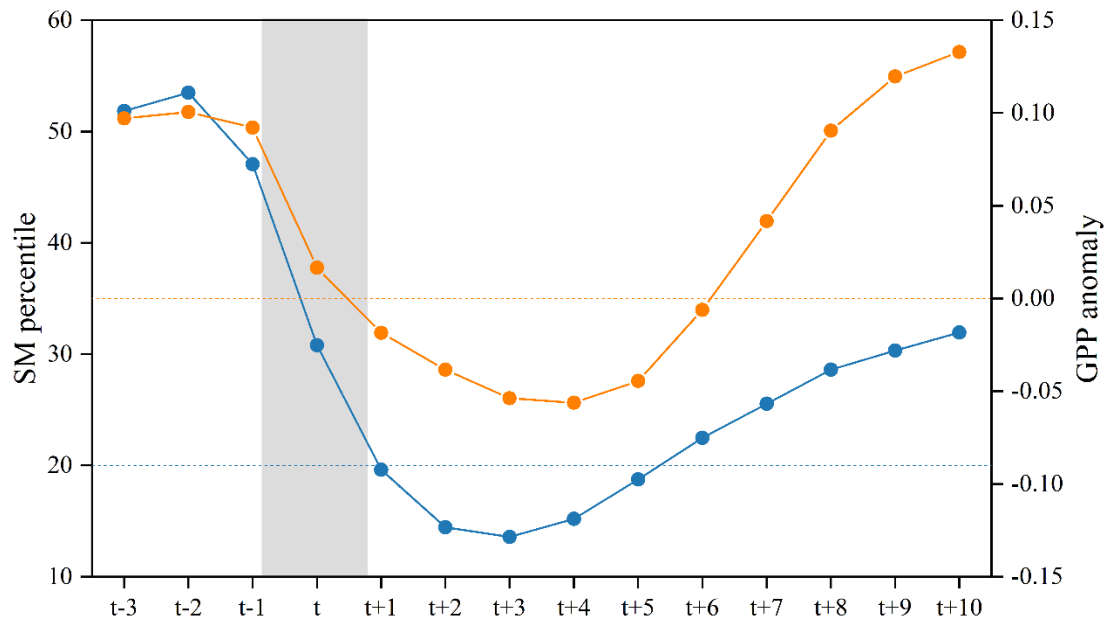
Figure. S3. The mean values of soil moisture (SM) and GPP anomaly between -4 pentads and +9 pentads after flash drought onset.

Figure S4. Recovery time to original state at 80%(a), 90%(b), 100%(c), and 110%(d) recovery thresholds. Box plots of recovery time under different recovery thresholds (e). The box plots display the maximum, upper quartile, median, lower quartile, and minimum values of the recovery time distribution.
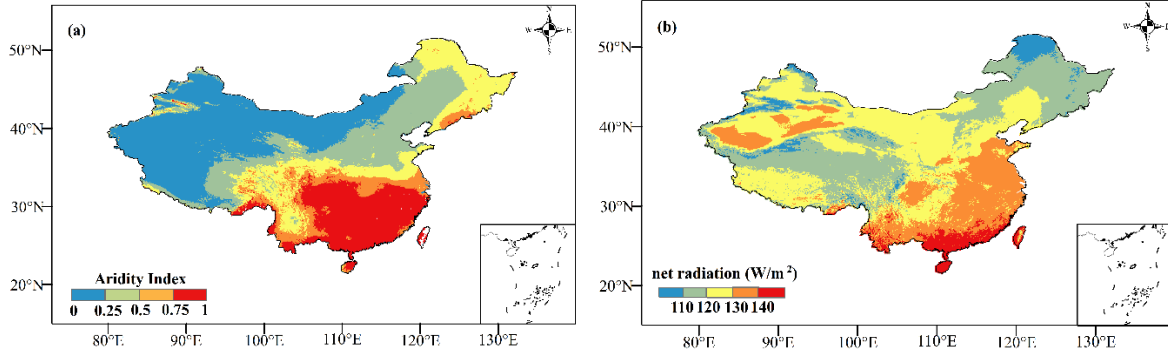
Figure. S5. The patten of aridity index (a) and pentad net radiation(b).