

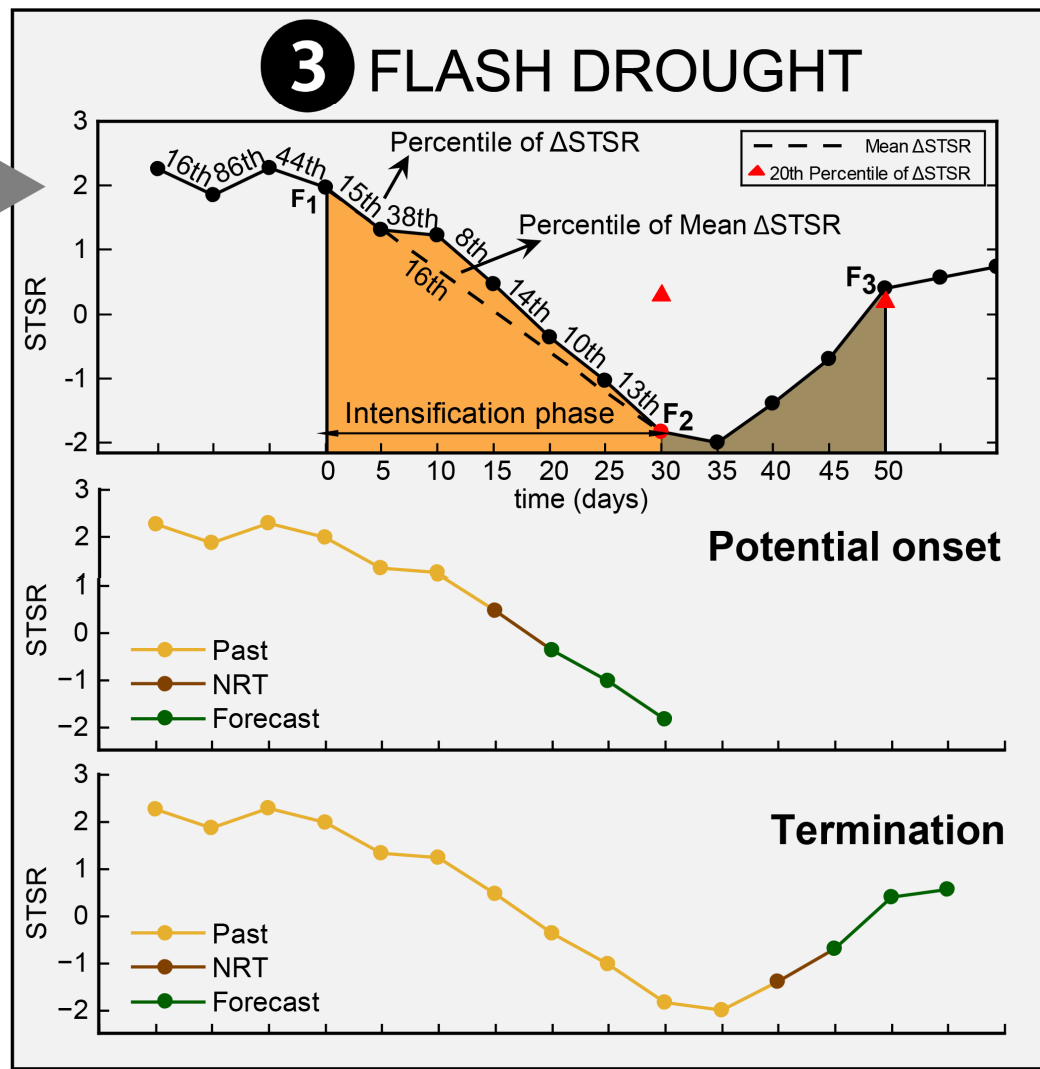
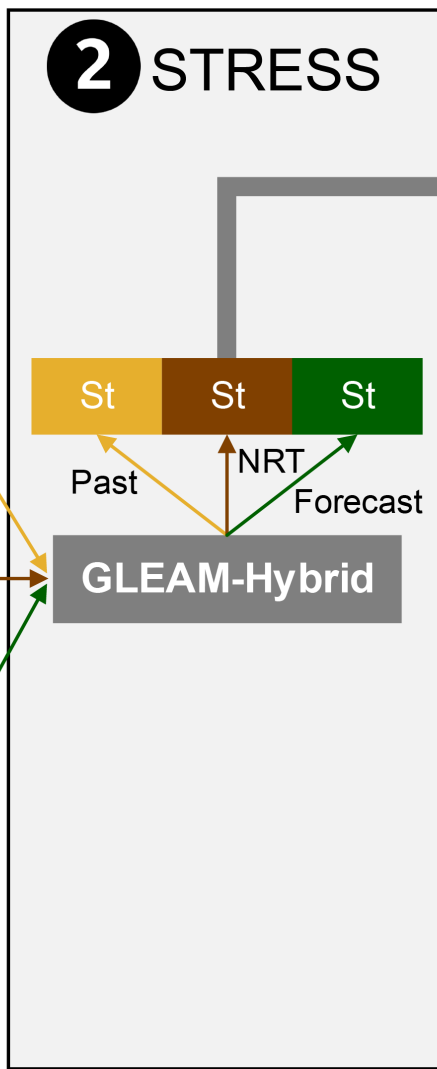
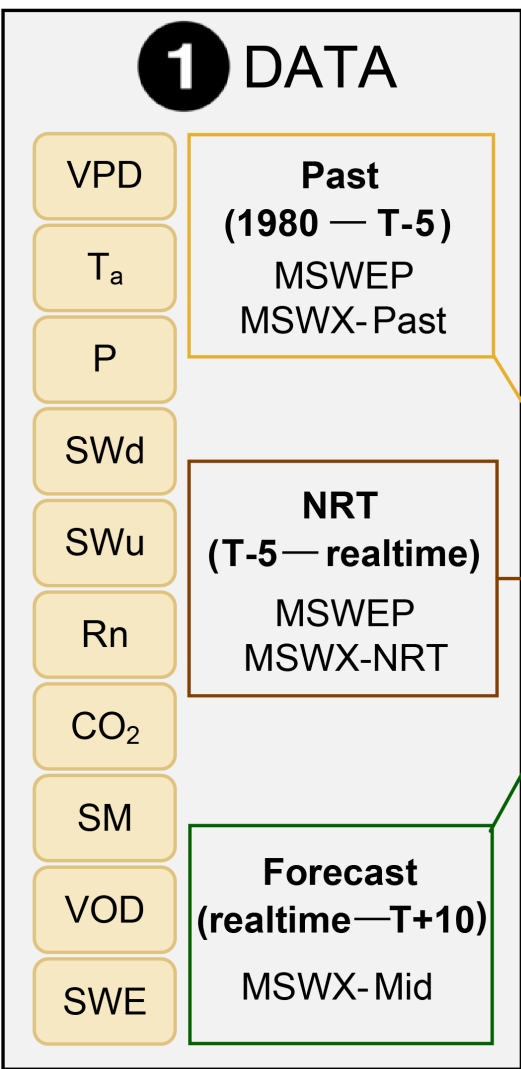
FD-VIEWS

A new operational global flash drought early-warning system based on transpiration stress forecasts

Diego G. Miralles, **Qiqi Gou**, Akash Koppa, Hylke E. Beck, Yonghua Zhu, Haishen Lü, Hao Li

Flash Drought Viewer, Index, and Early Warning System

FD-VIEWS



1 DATA

VPD	Past (1980 — T-5) MSWEP MSWX-Past
T _a	
P	
SWd	NRT (T-5 — realtime) MSWEP MSWX-NRT
SWu	
Rn	
CO ₂	Forecast (realtime — T+10) MSWX-Mid
SM	
VOD	
SWE	

1 DATA

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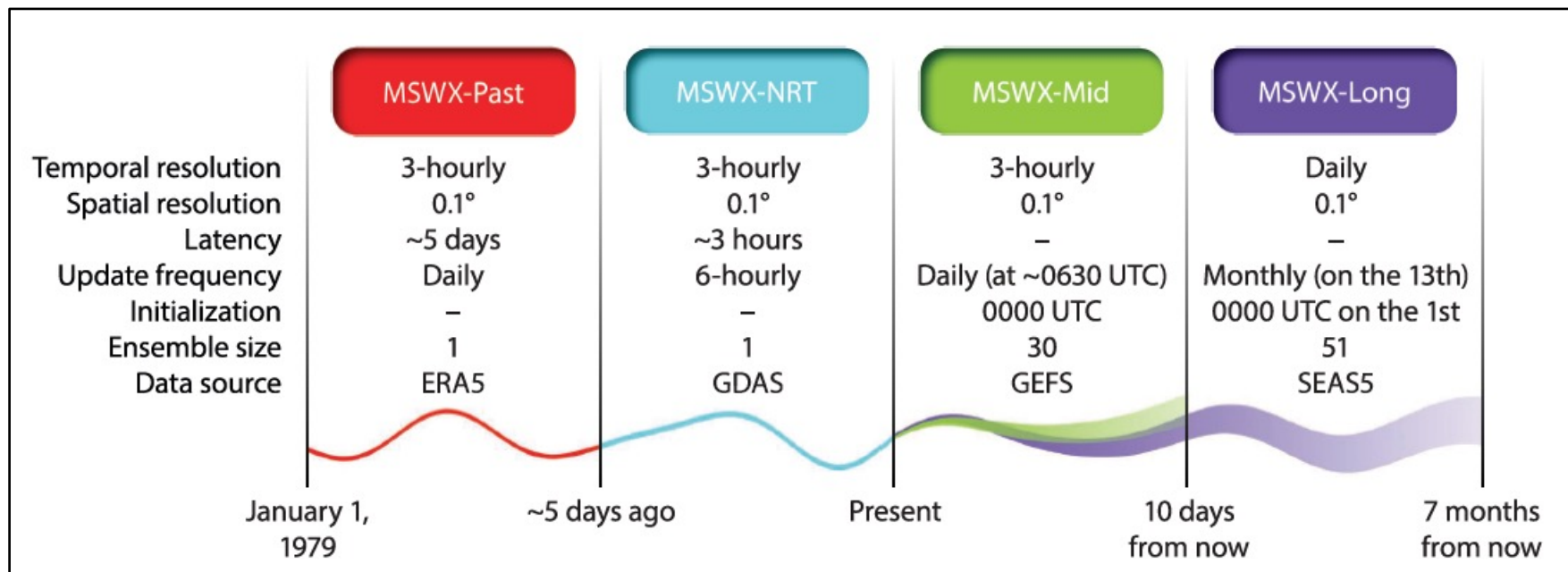
MSWX

Global 3-Hourly 0.1° Bias-Corrected Meteorological Data Including Near-Real-Time Updates and Forecast Ensembles

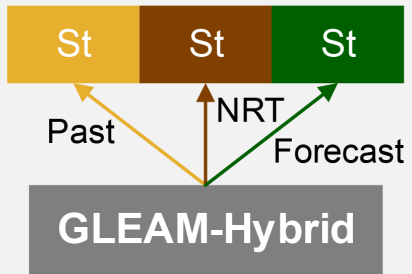
Hylke E. Beck, Albert I. J. M. van Dijk, Pablo R. Larraondo, Tim R. McVicar, Ming Pan, Emanuel Dutra, and Diego G. Miralles

BAMS
Article

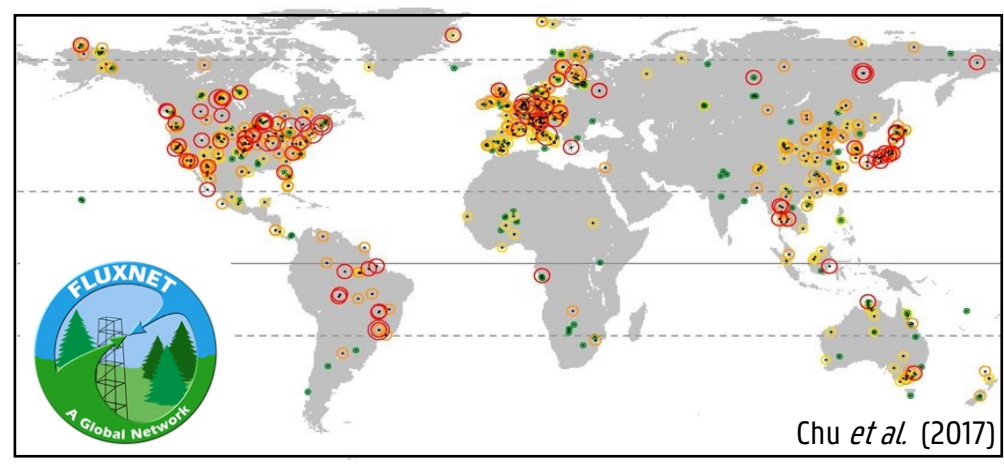
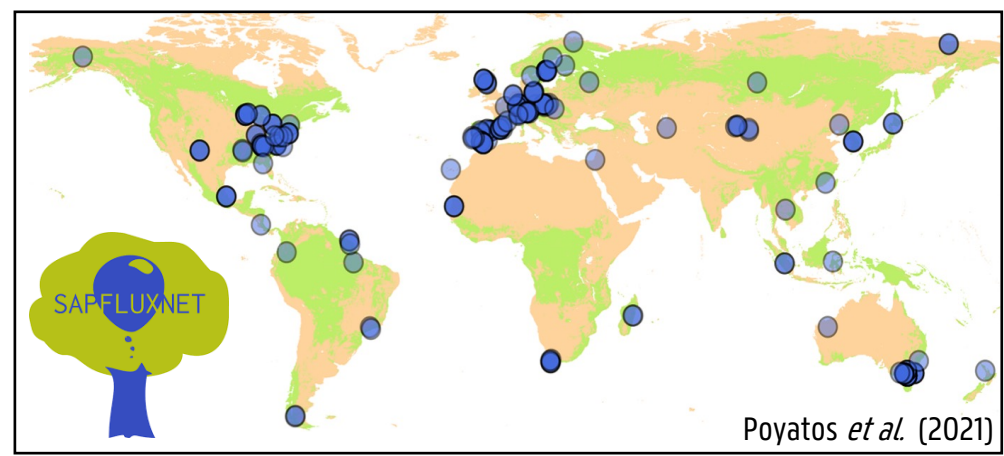
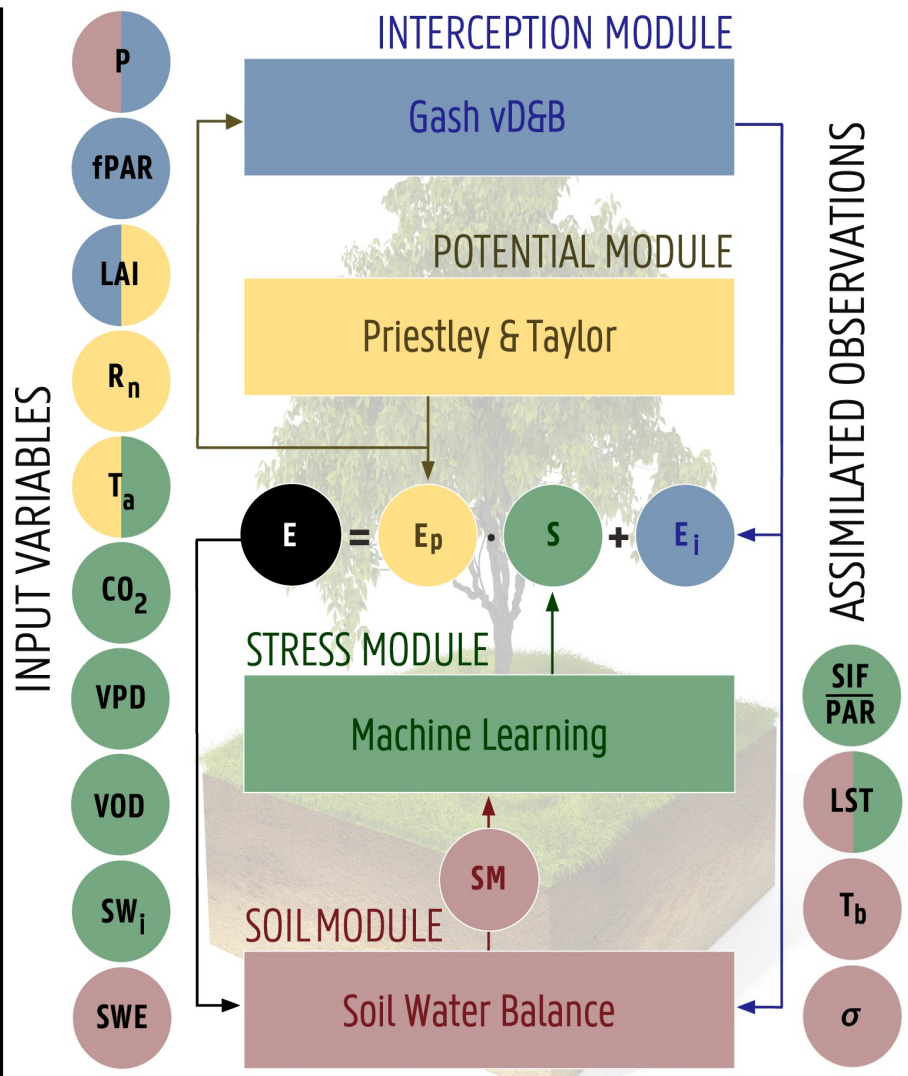
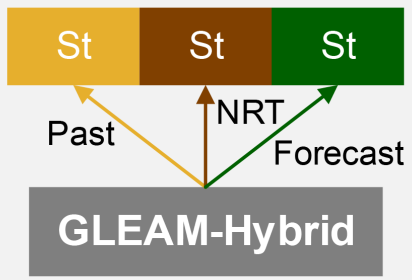
2022



2 STRESS

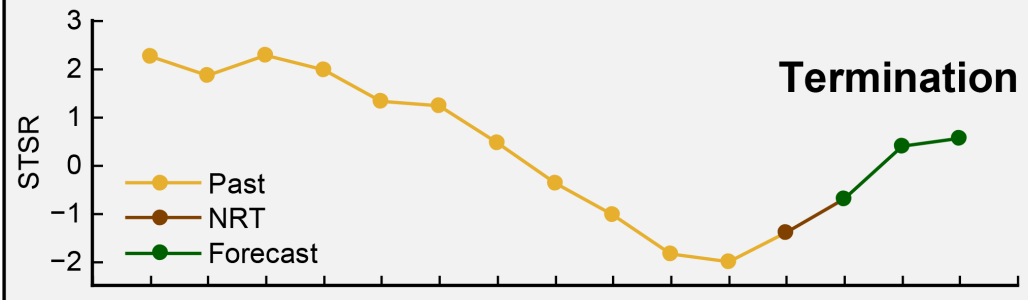
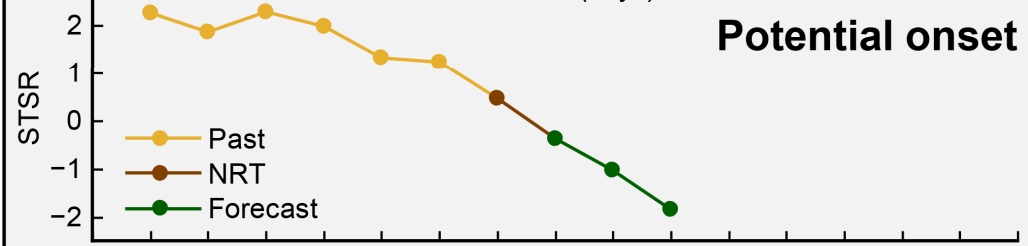
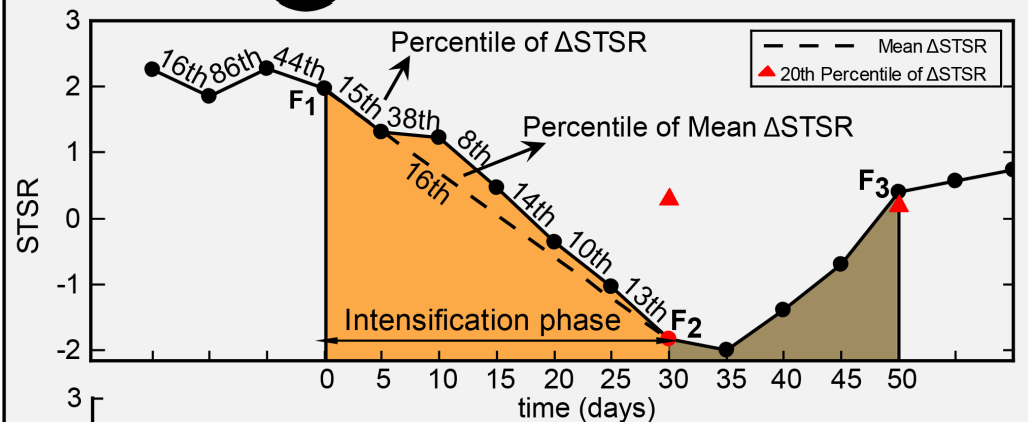


2 STRESS

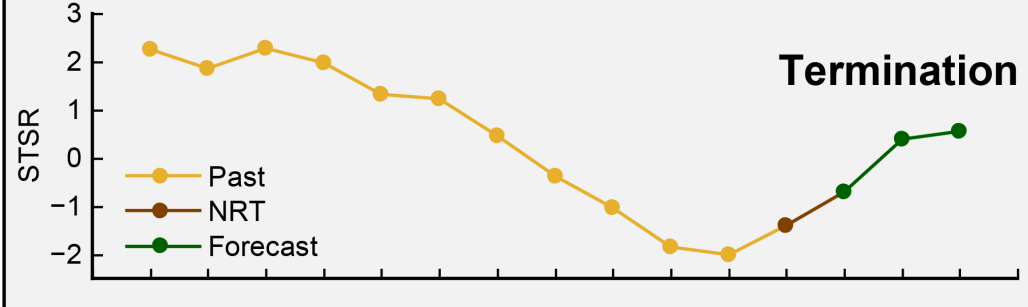
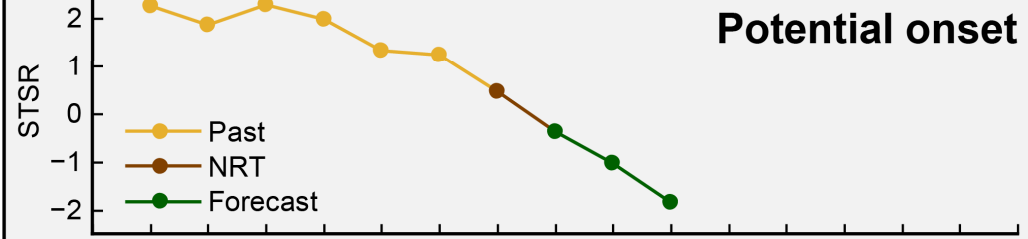
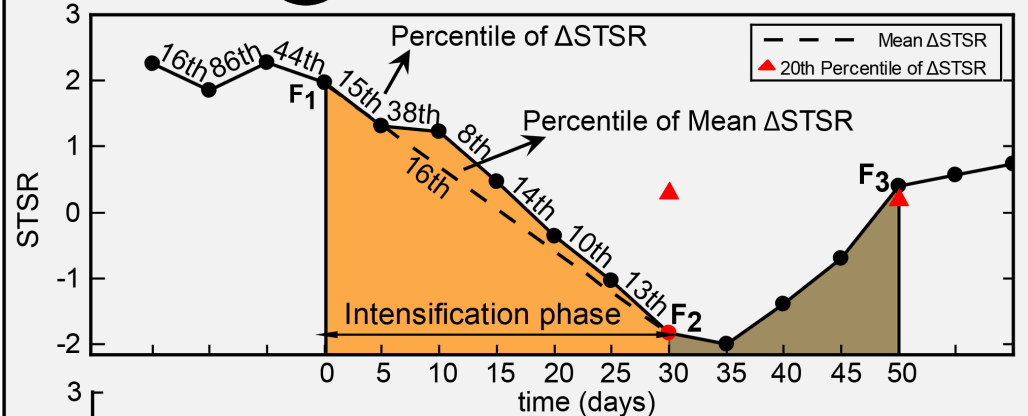


<https://doi.org/10.1038/s41467-022-29543-7> OPEN
 A deep learning-based hybrid model of global terrestrial evaporation
 nature COMMUNICATIONS Koppa *et al.* (2022)

3 FLASH DROUGHT



3 FLASH DROUGHT



A Methodology for Flash Drought Identification: Application of Flash Drought Frequency across the United States

JORDAN I. CHRISTIAN,^a JEFFREY B. BASARA,^{a,b} JASON A. OTKIN,^c ERIC D. HUNT,^d RYANN A. WAKEFIELD,^a PAUL X. FLANAGAN,^{a,c} AND XIANGMING XIAO^f



Journal of Hydrology
Volume 604, January 2022, 127224

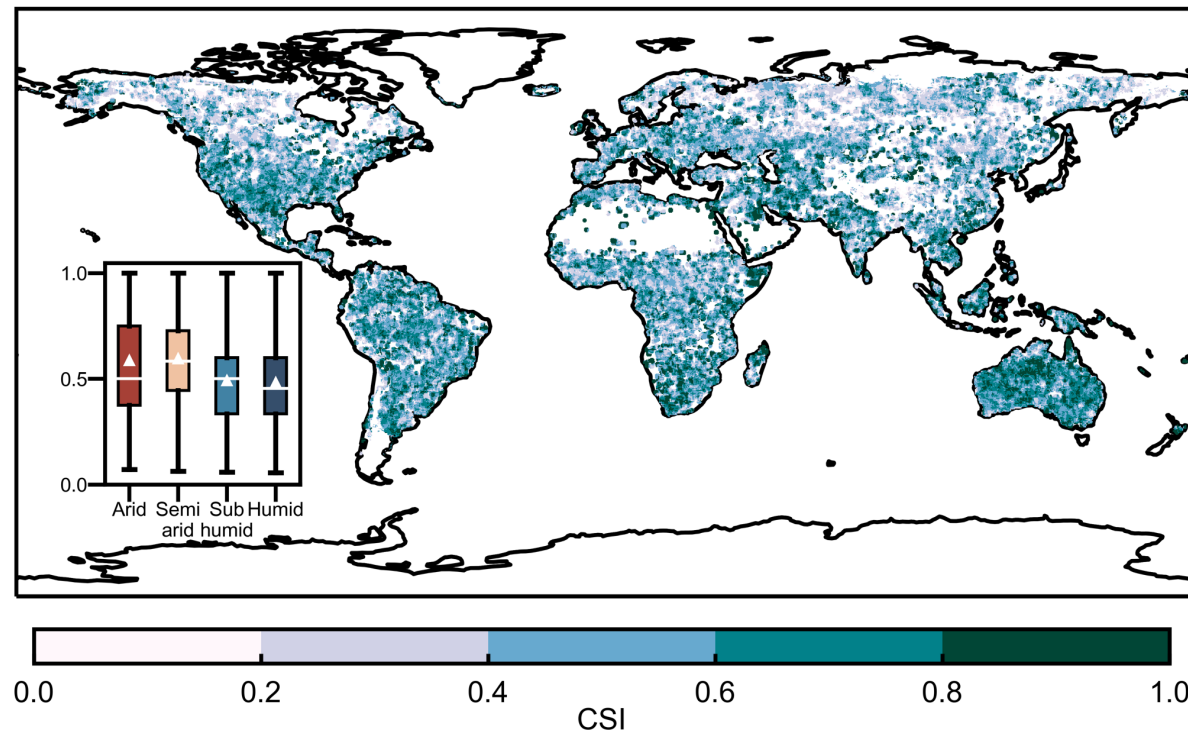
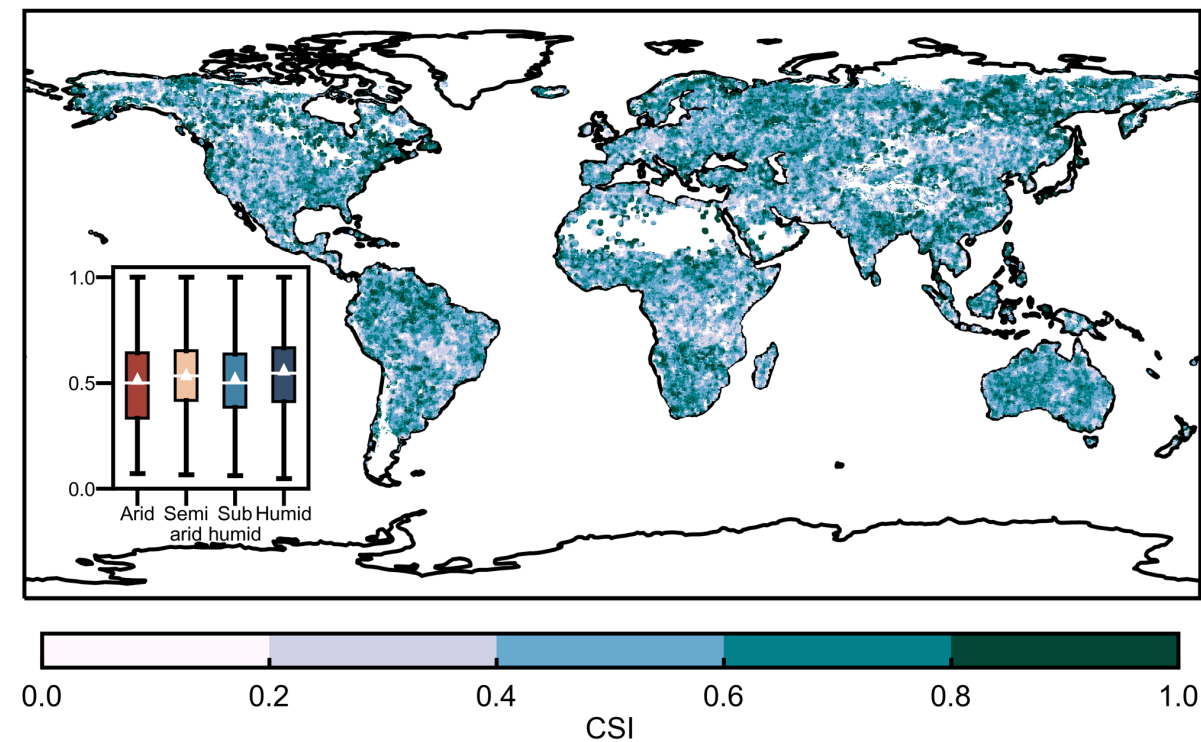


Application of an improved spatio-temporal identification method of flash droughts

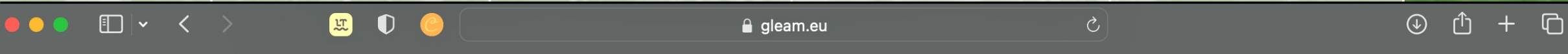
Qiqi Gou^a, Yonghua Zhu^a , Haishen Lü^a , Robert Horton^b, Xiaohan Yu^c, Haoqiang Zhang^a, Xiaoyi Wang^a, Jianbin Su^d, En Liu^a, Zhenzhou Ding^a, Zhenlong Wang^e, Fei Yuan^a

$$STSR = \frac{(S_t - \bar{S}_t)}{\sigma_{S_t}} ; \Delta STSR = \frac{\overline{\Delta STSR}}{\sigma_{\Delta STSR}}$$



Onset | Hindcast skillTermination | Hindcast skill

Critical Success Index (CSI) = true positives / Σ (true positives, false positives, false negatives)



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Method

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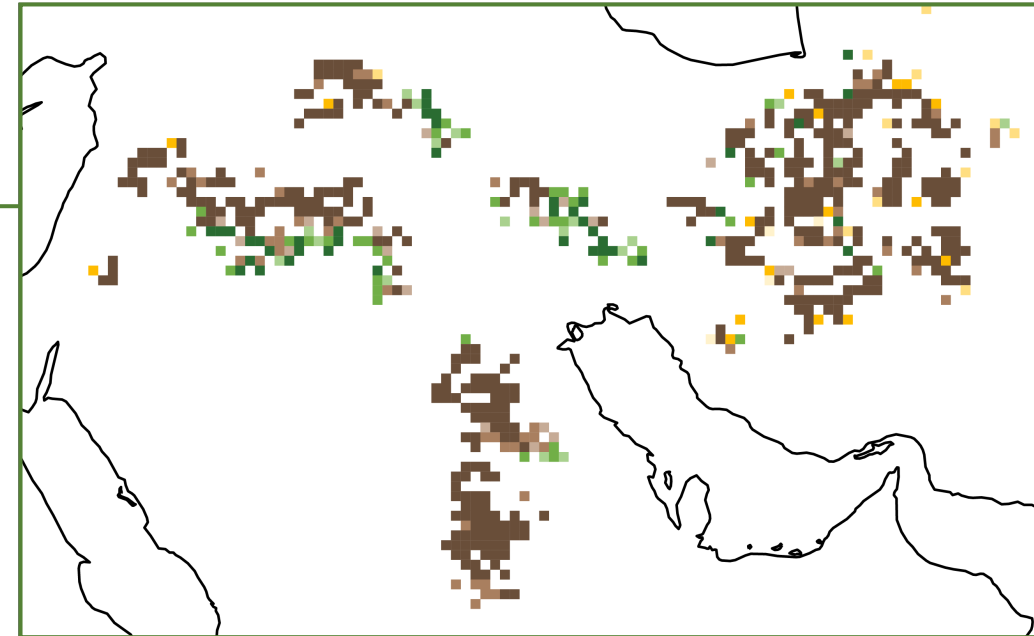
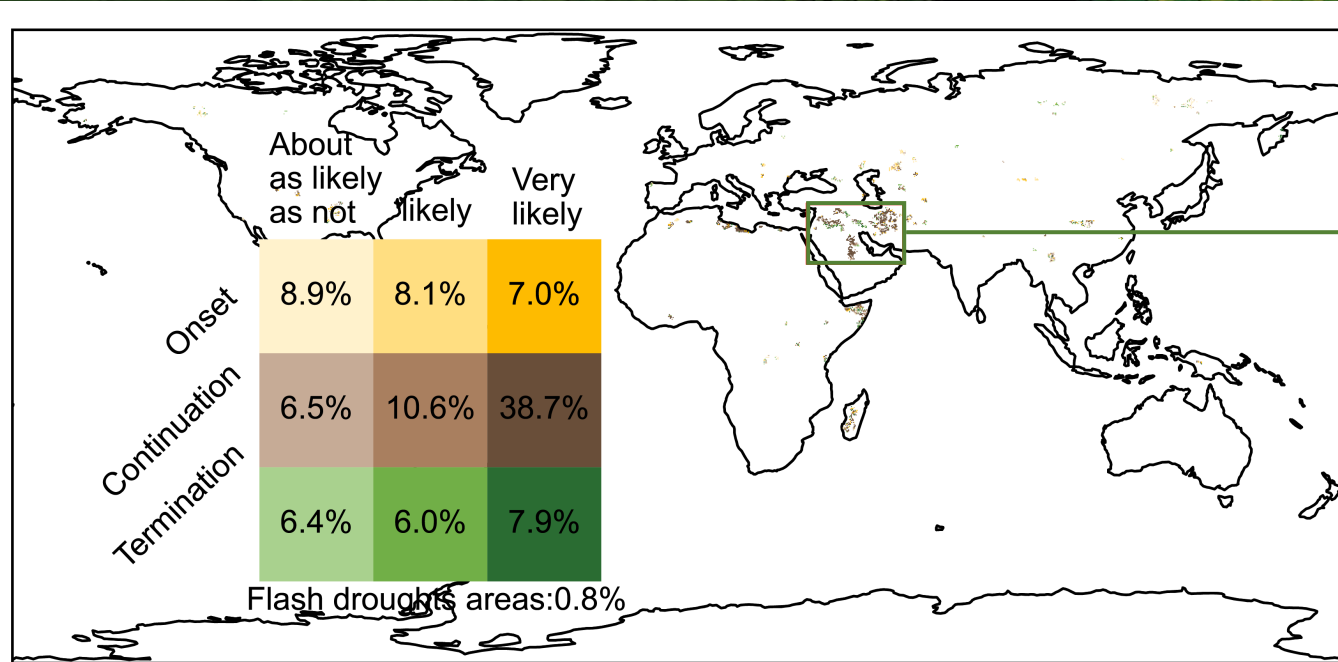
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